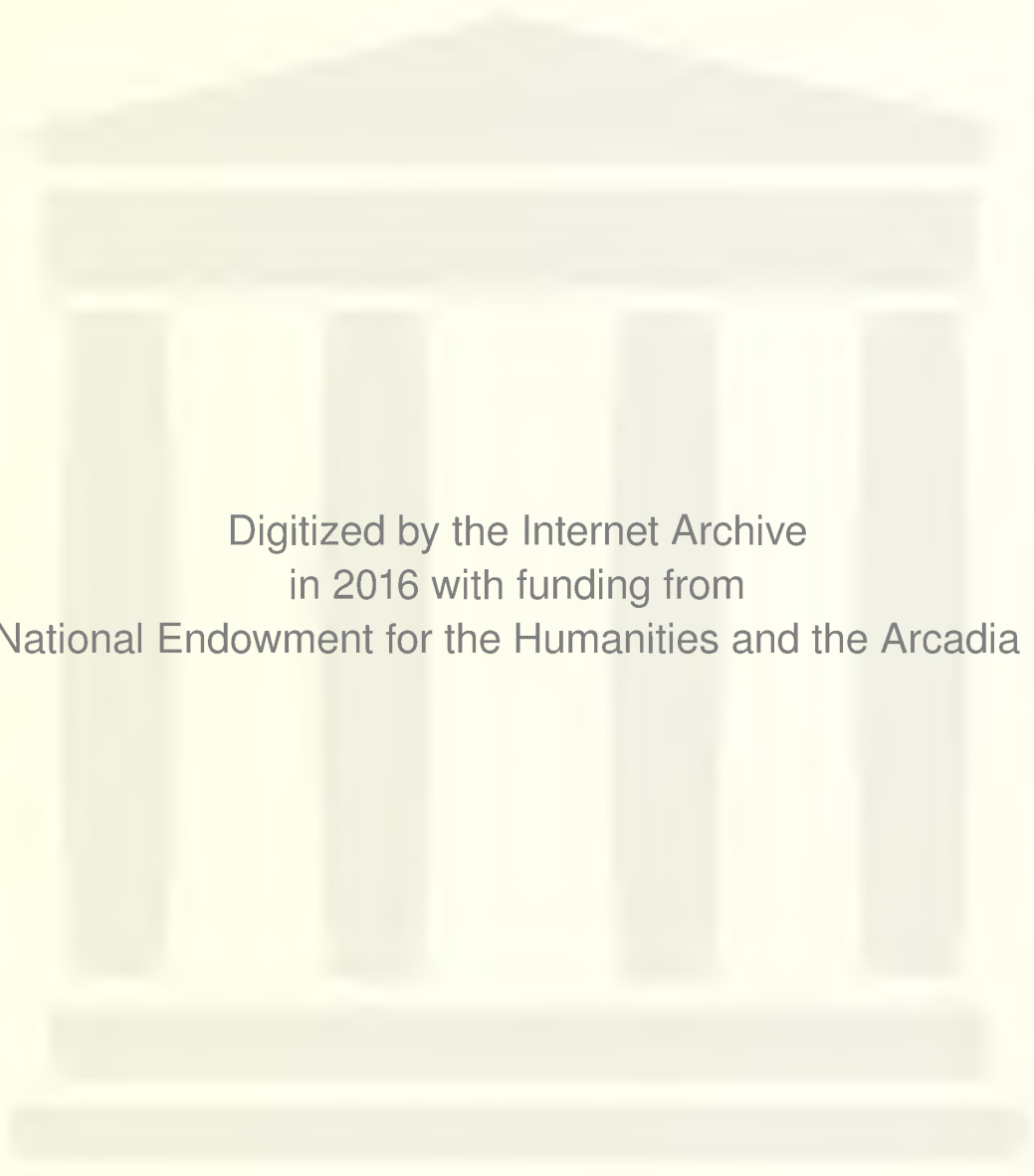


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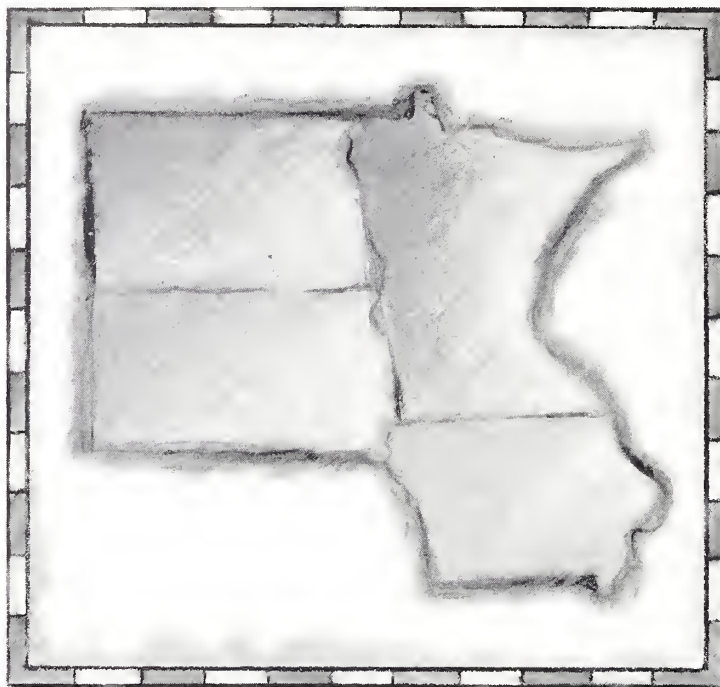
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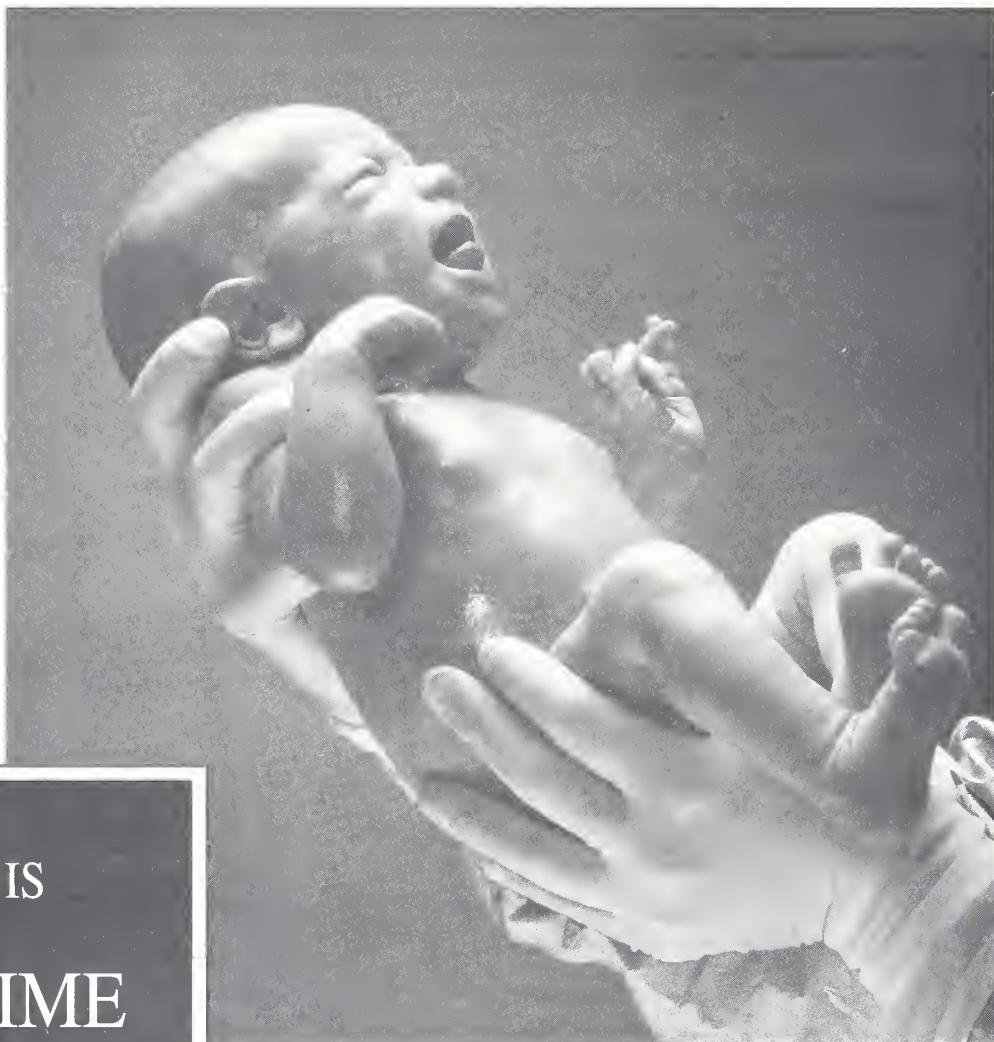
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The 1995 annual meeting of the South Dakota State Medical Association is being held on June 8-10, 1995, at the Ramkota Inn in Sioux Falls, SD.

CONTRIBUTORS NEEDED!

During the last four years the South Dakota Medical School Endowment Association has granted more than 200 loans totaling over \$220,000. These low interest (6%) loans go to medical students who are attending the University of South Dakota School of Medicine. The needs of these medical students continue to increase. To meet these needs the Endowment must have continued growth in both the size and numbers of donations.

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A beautiful wild flower captured by the camera of Randy Hoeck, Sioux Falls, SD.

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About Our New President

I was born in O'Neill, Nebraska. When I was in the sixth grade we moved to Armour, South Dakota where I attended high school. I did one year of undergraduate school at Creighton University in Omaha and then transferred to the University of South Dakota in Vermillion, where I received my medical degree in 1981. After graduating from medical school, I did a family practice residency at Tulsa, Oklahoma. At the end of three years of training, I moved back to South Dakota. I joined Tony Berg in 1984 and, in 1993, Jeff Pinter joined us in practice.

I married Dan Flynn, a graduate from USD Law School. He works for First Fidelity Bank in Winner. We have three children: our oldest is Grant, who is 11 and has decided to start guitar lessons; our middle daughter is Katie, who is 8 and into gymnastics and our youngest daughter is Jamie, who is five. She is in

kindergarten and also loves bike riding. Grant and Katie study karate and I go along with them when I can, but they are progressing at a much faster rate than their mother. Dan and I enjoy golfing when we can. We have also obtained our NAUI certification for scuba diving, but finding the time to get to a good diving spot is difficult.

I was first involved in the Medical Association as a delegate from the Rosebud District and then as a councilor. I have enjoyed my involvement with the Association, especially the opportunity to meet so many of the state's physicians and make so many friends.

Mary Carpenter, MD, President
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This photo was taken in the spring when the water of the Sioux Falls is a raging torrent. The photographer is Younes Bakri, MD, of Sioux Falls, SD.

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About the Cover

This photo is of the wild flower, Indian Paintbrush. Photographer, John W. Herbst, Grizzly Bear Nature Photo, Keystone, SD.

South Dakota Foundation for Medical Care

Nationwide Cooperative Cardiovascular Project

The Cooperative Cardiovascular Project (CCP) began with a premise: To see whether patients were receiving widely accepted in-house and outpatient therapies for acute myocardial infarction (AMI). The Health Care Financing Administration directed all Peer Review Organizations to conduct the CCP in their states, knowing that cardiac disease is common and often fatal to Medicare beneficiaries. Four Peer Review Organizations pilot tested the project for two years. Their initial findings suggested there was a potential for improvement in the use of thrombolytics, aspirin, and beta blockers for Medicare patients having no contraindications.

Because this is a national project, HCFA developed quality indicators for Peer Review Organizations to use for profiling. The indicators were based on practice guidelines from the American College of Cardiology and representatives of national medical specialty societies.

SDFMC is currently prepared to receive the CCP data that was collected from South Dakota hospitals by Clinical Data Abstraction Centers. This data compares states with states and hospitals with hospitals.

SDFMC will conduct further analysis with the help of a focused physician group. All of the quality indicator profiles will be examined. Areas of exceptional performance and processes that contribute to successful performance will be identified. Areas where improvement seems possible will also be identified. The information on processes that contribute to exceptional performance will be shared.

This data will go to the respective hospitals to be used in the hospital's quality improvement program. SDFMC, physicians, and hospital medical staff will then discuss how CCP data identifies areas for patient care enhancement opportunities in their hospitals.

SDFMC believes that quality is most appropriately assessed by the professionals who provide the patient care and that SDFMC's mission is to serve as a catalyst to promote health care quality assessment and improvement.

Gerald E. Tracy, MD
Medical Director

SOUTH DAKOTA JOURNAL OF MEDICINE

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About the Cover

"Autumn Hay" a woodcut by Nathan Holman, a Sioux Falls artist. His paintings, woodcuts, and carved masks are well known throughout the country.



**Mary S. Carpenter, MD, President
South Dakota State Medical Association**

Last night on one of the local television stations, I watched a Town Hall Meeting about the future of Medicare. The local audience had an opportunity to ask questions of our South Dakota Democratic senator and a Republican senator from Minnesota. There were questions from the audience about the financial stability of Medicare, about the cost of preserving Medicare, and the cost of not preserving Medicare. There were also questions about the danger of continued cuts in reimbursement to physicians and health care facilities, especially in the more rural areas. The questions were ones that we have all asked in the past and will continue to wrestle with in the future. The one thing that struck me in listening to this debate was not the issues being discussed, but the partisanship I heard in the responses. I very seldom heard an answer from either senator that wasn't prefaced by "the Republicans say or the Democrats say". The future of government health care programs is not being determined by what is in the best interest of the patients (the reason that I believe these programs were established), but what will best serve the party that comes up with the winning solution. I believe that it is increasingly important that we pay close attention to the proposals being put forth and make sure we are convinced that the well-being of our patients is not forgotten.

Because of the changes that are bound to come, albeit at a slow pace, we need to know how to communicate with our political leaders. Those of us who are

involved in medicine every day have a great deal of expertise to add to these political debates. We are the ones who understand the practice of medicine and must be advocates for our patients. On November 17th, there will be a Constituent Skills Workshop sponsored by the SDSMA and the SD Medical Group Management Association. The presentation will be made by Michael Dunn, a former political science professor who has established his own public affairs consulting firm. He specializes in developing grassroots lobbying programs and political education seminars. This workshop is to teach us to understand the legislative process and why local involvement and action is so necessary.

I believe that learning the proper way to communicate in the political process is of utmost importance in accomplishing our goals. We must also be organized in presenting our agenda to get our voice heard and insuring the development of good, fair health care reform. I would like to encourage all members who are interested in assuring the proper direction for health care reform to register for this meeting. Information can be obtained by contacting me or the state office.

A handwritten signature in dark ink that reads "Mary Carpenter, MD". The signature is fluid and cursive, with a long horizontal line extending from the end.

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About the Cover

"Fall Flight". This sculpture of a pheasant in flight was done by Raymond Rogers, a native of North Dakota. He creates and casts his sculpture at his studio and foundry in Mott, North Dakota. His award winning art work is included in many private and public collections in the United States and Canada. His work has been exhibited in galleries from North Dakota to New Mexico.



Mary S. Carpenter, MD, President
South Dakota State Medical Association

I would like to use this month's article to give you some updated information about changes on the horizon for the AMA. About 18 months ago, a group called the Consortium to study the Federation of Medicine had their first meeting. The Consortium was put together to see if a unified physician organization could be formed to better speak with one voice about issues affecting both physicians and patients. The Consortium is formed of representatives from all 54 state and territorial medical societies, all 82 specialty societies represented in the AMA House of Delegates, county medical societies, and representatives of urban and rural areas, special interest organizations (IMGs, AMWA, military service), and different practice types. There are also representatives of the AMA Board of Trustees, Council on Long Range Planning and medical student, resident, and young physicians sections. Dr Tom Krafka has been the representative from South Dakota, but was unable to attend the October meeting of the Consortium. I was able to take his place and found the experience both frustrating and enlightening.

The meeting of approximately 250 people uses some amazing technology called IRIS. Each participant has a handset where they can key in responses to questions asked of the whole group. The results can be viewed immediately on a projection screen and the computer can display comparisons of answers by demographic data.

The purpose of the study as I said above is to develop a more unified organization to more accurately repre-

sent the house of medicine. The design criteria that have been established are:

1. Speak with a clear, unified voice on behalf of physicians.
2. Be credible and reliable in the eyes of the public.
3. Provide a forum for discussion and debate on key policy concerns.
4. Serve as a mechanism to resolve disagreements in organized medicine.
5. Facilitate communication, interaction and connection among physicians and medical associations.
6. Foster efficient and informed decision-making.
7. Be cost-effective, returning the greatest value per member dollar.
8. Be accessible to members and responsive to their changing needs and concerns.
9. Eliminate unnecessary, duplicative processes and services in organized medicine.
10. Promote leadership development and opportunities, particularly for young physicians and physicians in active practice.
11. Promote "trust" within the Federation system.

After two days of work in the group format a smaller group of the Consortium members called the Project Team continued the work for another day and a half. Their charge is to take the opinions expressed in the Consortium and develop recommendations to be brought to the AMA House of Delegates at the interim meeting in December. There was considerable discussion on how changes should be made in representation to this new Federation of Medicine. The present system will need to be changed to assure physician input along five dimensions: geographic location, specialty, type of practice arrangement, career state, and demographic or other special grouping. As with any group, the members with the political control are concerned about keeping that control and the remaining members want to gain more of that control. I was very impressed, however, that everyone involved in this project wanted to effect real change. They have all realized that medicine must be a more unified group to accomplish the goals of protecting patients and preserving our ability to practice medicine in the best possible environment. The group is aware that we have the ability to keep our organization more closely linked with the advancing technology available. There is also responsibility to share and not duplicate services among the different groups in medicine.

Updates on the Consortium meetings and the work of the Project Team are available from the AMA office. I would also be glad to answer any questions you may have regarding this process and I am sure that Dr Krafka would also be happy to do the same.

A handwritten signature in dark ink, reading "Mary Carpenter MD". The signature is fluid and cursive, with a long horizontal stroke at the end.

SOUTH DAKOTA

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Bluejays in the snow. Photographed by Younes Bakri, MD, formerly from the USD
School of Medicine in Sioux Falls.

President's Page



**Mary S. Carpenter, MD, President
South Dakota State Medical Association**

The annual meeting of the North Central Medical Conference was held recently. The speakers discussed the changing direction of managed care. It was interesting to hear that one of the largest groups of businesses in Minnesota is changing their approach to purchasing of insurance for their employees. They are starting a new program where the employee is responsible for choosing his own health care system. The employer's group is changing their role from the one who makes the health care decisions to the role of monitoring the performance of the health care groups and reporting to the employees. They are trying to develop "report cards" of sorts to provide information to individual consumers so that they can compare and make the appropriate decisions about where they want to spend their premiums. This employer buying group has decided not to focus so much on forming their own networks from which to purchase health care, but to let those networks form on their own and to compete in the marketplace based on their performance and their patient's satisfaction. This explanation is obviously simplified from the speakers that I heard, but the encouraging thought is that it will put decisions back between the physicians, patients, and other health care providers. I believe that putting more responsibility on the consumer to make educated decisions about the

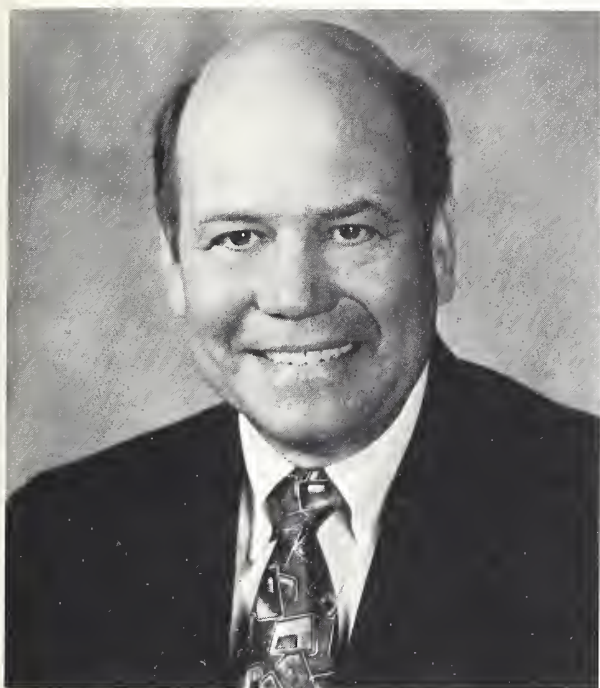
spending of their health care premium dollars will be a change in the right direction.

I was struck by one other thought at the end of the North Central Conference that is really unrelated to the economics of health care. There are six states in the North Central Conference: North Dakota, South Dakota, Nebraska, Minnesota, Iowa and Wisconsin. The first thing that comes to mind when I look at this group is how different they are. The demographics, the politics, and the responses to changes in health care systems are all widely varied. The thing that surprised me was how similar many physicians' concerns were. I attended a meeting of the six state presidents and was amazed at the number of issues that were similar for all of the Medical Associations. We decided that we had several issues that we could work together on, not the least of which was the low rate of Medicare reimbursement to our rural states despite the fact that our senior population is not at the bottom of the list in payment into the system. We have agreed to work together to bring as much attention to this issue nationally as we can for the benefit of our rural states during this time of federal program reform.

After the meeting I became even more convinced that a cohesive organization with similar interests is an important avenue to accomplishing what we need to do. I am not unaware of the significant issues that tend to divide us even in as small a medical community as we have in South Dakota. It doesn't take long, however, to find the many issues that are the same. As an organization we need to keep the most important issues (which I think that we can all agree on) in the forefront. A unified group working for the same goals is still an effective tool, even if not the only one. This association needs participation from all of its members to work together and to accomplish the many things that we can all agree are important to us and to our patients.

A handwritten signature in dark ink that reads "Mary Carpenter, MD". The signature is fluid and cursive, with a long horizontal line extending from the end.

President's Page



James R. Reynolds, MD, President
South Dakota State Medical Association

Returning to South Dakota's winter and the throes of medical practice is a "reality check" after a week in the balmy pacific. The AMA Interim Meeting was held in Honolulu December 4-7. The mood of the meeting was more relaxed—in part, I am sure, due to the balmy weather of Hawaii—than the Annual AMA Meeting held in June of this year. With some of the issues of health system reform now concluded, the House of Delegates took up the job of dealing with a host of resolutions. Now that a national government controlled system is apparently on the back burner, state level solutions appear to be more likely to evolve. The dangers of large managed care organizations still loom significantly in many locations and a number of resolutions urged protection for both patients and physicians. The House of Delegates referred this issue to the Board of Trustees for a report back by the Annual Meeting in June, 1995.

Underlying the whole meeting was the theme of reorganization of the AMA to maintain its place for physicians in the rapidly changing medical neighborhood. The new strategic plan entitled "Strategic Directions and Emphasis for the American Medical Association - 1995 and Beyond" was presented. It calls for renewed commitment to scientific, educational and ethical standards as the basis of professionalism along

with being a strong advocate for patients, physicians and public health in this world that is being increasingly driven by competitive and economic forces. In addition, it calls for a strong corporate business environment creating new lines of products and services that will be of value to physicians.

On a broader scale, the AMA along with 160 other medical organizations has embarked on a two year study of how such a joint federation would define divisions of labor, reduce non-productive competition and streamline the whole function of these related, but disparate groups. With government and insurance companies being focused on cost, participants in the federation study feel the role for medicine will be to become the public's primary source of information on quality and patient rights. The feeling is that medicine's "building blocks" are in place, but that they just need to be pieced together. Dr John Stewart, AMA Board of Directors' Chairman, expressed his feelings as such, "When you pull away all the trappings of where the essence of the AMA is going in the future it has to be on the side of professionalism and the doctor/patient relationship."

Upon completion of this AMA meeting, our South Dakota AMA Delegate, Dr Robert Ferrell, passes the baton to Dr Mike Pekas, Delegate Elect. I personally, as well as on behalf of the South Dakota State Medical Association, extend my thanks to Dr Farrell for his years of service as the delegate of the South Dakota State Medical Association and wish Dr Pekas well as he assumes the delegate responsibility.

A handwritten signature in cursive script that reads "James R. Reynolds". The signature is written in dark ink on a light background.

They Don't Believe Us

Recently we were fortunate to have the now Governor elect, Bill Janklow, of the state of South Dakota at our home in Rapid City for a discussion about matters of mutual concern between physicians and state government. There were 20-25 physicians, physician's spouses and the Governor elect. He is most forceful, knowledgeable, and persuasive. Next time we will have to get a few more physicians to even up the odds. This is not to be interpreted as a slight to the forthright answers given to our questions.

Naturally, the subject of professional liability was discussed. I did attempt to point out that the legislative effort by the SDSMA was not to prevent justifiable lawsuits or to prevent patients collecting economic damages in awards but to limit or cap noneconomic damages so that the total awards are not so high. I attempted to point out that there once was a cap but now there is essentially none and that patients do end up paying for the excessive awards. Incidentally, when he was last Governor, Mr Janklow was instrumental in establishing the one million dollar cap which has been basically overturned. The response to this was that maybe a cap could be considered on non-economic damages but the State Supreme Court does not look favorably on any limits and that physicians should "police" themselves much better.

It was noted by several present that most physicians spend an inordinate amount of time on quality review or assurance committees, credential committees, grievance committees etc, plus many of us have multiple inspections from OSHA, CLIA and the State Health Department as well as voluntary inspections which are more educational and peer review oriented. The South Dakota Foundation for Medical Care also specifically monitor South Dakota physicians. The counter to this was that it is fine in the hospital but what about office practice? However, this part of medical practice is being increasingly monitored by Medicare and many of us have voluntary peer review inspections.

Regardless, we have not convinced the Governor elect and apparently, we have not convinced the public. My question is how do we do this? Should we ask our district councilors to designate a commission to try to show the public just how much time and energy goes into quality review activities? I dare say that such intense activity is not required of any other professional group.

The fact that bad results will always occur in any medical practice and that, often in retrospect, some of these might have been avoidable drew acknowledgement, but was followed by a reassertion that physicians are not critical of themselves in constructive ways. Illustrative cases were described. It seems to me that our only recourse is to somehow make the public aware of our efforts at quality review. This could be

accomplished by placing advertisements in local newspapers or designing brochures for physician's offices. Regardless, I believe we must continue to address the issue of professional liability as a cost issue.

John F. Barlow, MD
Editor

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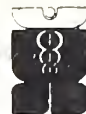
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The State of South Dakota's Child: 1994

Ann L. Wilson, Ph.D.

Editorial Note:

Each January this report to the *Journal* provides us with the opportunity to consider the state of health of South Dakota's children. The infant mortality data presented continue to highlight the challenges that all citizens of the state, not just health care providers, must face to support new parents during pregnancy and during the early days of their children's lives. This year Dr Wilson provides us with data that further challenge us to consider the very complex issues related to adolescent pregnancy. She thoughtfully points out that this is not just a problem of teens. Rather, this problem may well reflect dynamics of our society that must be examined and addressed if pregnancies among those who still need time for their own development are to be prevented. Your careful reading of this article is encouraged.

Robert C. Talley, Vice President/Dean
USD School of Medicine
Sioux Falls, SD

ABSTRACT

This annual report reviews natality and infant mortality data and also reviews teenage pregnancy in South Dakota. Data for 1993 again document a declining rate of birth for South Dakota with a 3% decline in the number of births since 1990 and an 18% decline since 1980. An identical number of infants (102) died in 1993 as 1992 with neonatal mortality slightly declining and post neonatal mortality slightly increasing for the state. Rates of perinatal causes of infant death are lower in South Dakota than they are nation-wide, but are higher for congenital anomalies, sudden infant death, pneumonia/influenza, and injuries/homicide.

The 1993 birth rate per 1,000 teenagers 15-19 years of age in South Dakota was 44.5 compared to the 1992 rate of 60.7 for the United States. In South Dakota the rate of teen births for American Indian mothers is over four times higher than that for whites. The American Indian rate is also higher than that observed for Indians nation-wide. Alternately, the South Dakota white rate of birth to this age group is lower than the national rate. For all babies born to teenage mothers, 69% of the fathers are beyond their teen years. The need to examine teen pregnancy as a societal, and not just an adolescent problem, is emphasized.

This report annually describes perinatal data for South Dakota that includes information on births and infant deaths. In addition, each year a specific topic related to South Dakota's children is presented and this year adolescent pregnancy will be the focus of this discussion.

BIRTHS

In 1993, 10,718 new babies were born in South Dakota. Of these newborns, 8,822 were white and 1,720 were of color, 94% of whom American Indian. This total number of newborns is the lowest in any year since 1973, representing a 3% decrease since 1990, and an 18% decrease since 1980. Further, births in 1993 include the lowest number of white newborns in 28

years and continue the trend of increased diversity in the state's population. In 1965, 11% of newborns were of color while today 18% of new babies are among this cohort.

Figure 1 presents a graphic portrayal of our state's declining birthrate. Since 1988 our rate of birth has dropped to a level lower than that observed nationally and that trend is well noted again in the provisional 1993 data showing a rate of 15.1 births per 1,000 population for South Dakota compared to a 15.7 rate for the country as a whole.¹ The emerging data for 1994 indicate that this trend of declining births is continuing.² These observations stress the importance of a regionalized approach to perinatal services. As the total number of babies to be cared for is obviously declining,

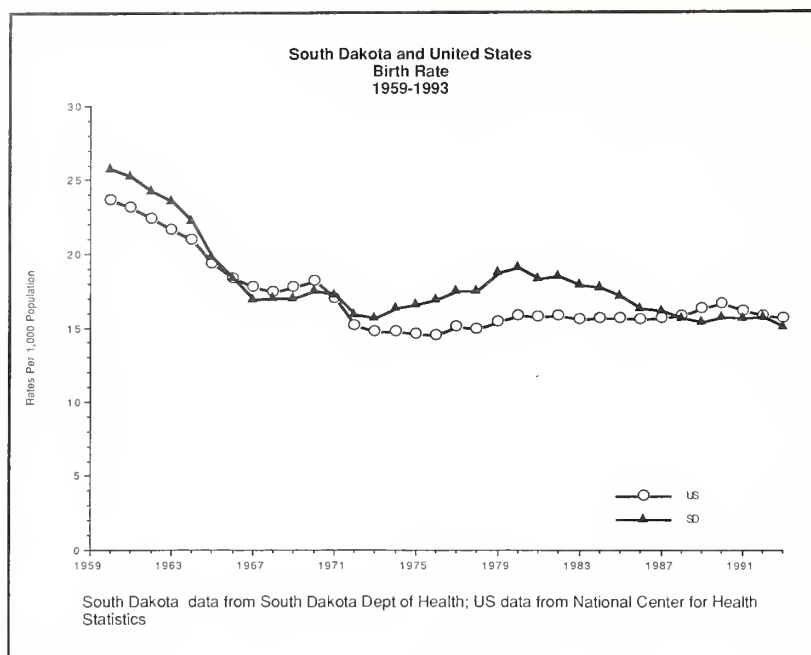


Figure 1

all the more important are collaborative efforts that optimize the efficient utilization of perinatal health care resources.

An examination of where new babies reside shows that over the past four years (1990-94) one third are residents of Minnehaha and Pennington Counties. Brown County has the third largest number of newborns followed by Meade, Shannon and Coddington Counties. Together these six counties contribute approximately half (48%) of all the newborns to the state.³

Data on the method of delivery are shown in Table I. Of the babies born in South Dakota between 1991 and 1993, 20% were delivered by cesarian section. Of these, 12% were primary and 8% were repeat sections. Also 2.4% of the vaginal births occurred to women following a previous cesarian section.³ National data show that our section rate is slightly lower than that observed across the country but South Dakota's percentage of vaginal births following a section is identical (2.4%) to that observed nation-wide in 1992.⁴

Table I
South Dakota and United States
Method of Delivery

	South Dakota 1991-93	United States 1992
Cesarian Sections	20%	22%
Primary	12%	16%
Repeat	8%	6%
Vaginal Birth Following Cesarian Section	2.4%	2.4%

South Dakota data from State Department of Health,
United States data from National Center for Health
Statistics

Birth weight is a critical parameter for the review of perinatal data. Persistently, the annual incidence of low birth weight in South Dakota (approximately 5%) has been one of the lowest of any state in the nation, and lower than the 7% observed nationally.⁴⁻¹⁰ Nonetheless, the prevention of low birth weight newborns is an important goal and one that was the focus of a five year collaborative state-wide educational effort that was launched in 1990.¹¹ Since this time, perinatal services also have continued to develop with specialized maternal-fetal care becoming increasingly available in the state.

A superficial review of current data on low birth weight newborns (weighing less than 2500 grams) gives disappointing evidence of the success of these efforts. Indeed, the mean percent of low birth weight newborns of the years subsequent to the initiation of the educational program (1990-93) shows that it is slightly higher (5.3%) than was

the mean of 5.1% for the years 1986-89.^{2,4-10} Important, however, is careful review of these data by 500 gram weight cohorts. This analysis offers evidence that suggests an important trend that may well reflect the effectiveness of more aggressive attempts to prolong pregnancy to avoid the consequences of extreme low birth weight.^{3,12-18}

Concomitant with the overall increase in low birth weight newborns, over the past four years, has been a decrease in the percentage of newborns weighing between 500 and 999 grams. These data show that there are approximately 10 fewer babies born a year in this weight category than in the four years prior to 1990. This trend may indicate that high risk pregnancies are being prolonged and that babies, though born weighing less than 2,500 grams, are more likely to be continuing their gestation to a weight above 1,000 grams. Hopefully these speculative comments will be verified by future data.

INFANT DEATHS

The decrease in the percentage of newborns in the 500-999 gram category is an important indicator of improved perinatal outcome. Though in recent years babies in this weight cohort have had an approximate 50 to 60% survival rate, they also comprise the highest percent of neonatal deaths of any birth weight cohorts.¹¹ In 1993 nearly three quarters of all neonatal (birth to 28 days of life) deaths in South Dakota were of low birth weight babies and 28% of all these neonatal deaths occurred in babies with birth weights between 500 and 999 grams.³

In 1993, 102 babies did not survive their first year of life.³ This statistic is identical to the number of infant deaths observed in 1992 with three fewer neonatal deaths and three additional post neonatal deaths occur-

ring in 1993.^{3,12} South Dakota's very small base of annual births means that each infant death is represented by approximately a tenth of a percentage point in total rates. When data are explored by racial groups, even larger effects on rates are observed with individual deaths.

Presented in Table II are the recent South Dakota and United States' infant mortality rates.^{3,19,20} The state's neonatal mortality rate (5.1) for 1991-93 is lower than that observed nationally (5.4) in 1992. The state's 1991-93 white neonatal mortality rate (4.6) and post neonatal mortality rate (3.1) are currently higher than the US rates (4.3 and 2.6) observed in 1992, the most recent year data for racial groups is available. There has been a persistent and dramatic trend over time for the state's population of babies of color to have a post neonatal mortality rate that is much higher than that for the state's white population (9.6 vs 3.1) and higher than that for babies of color (5.2) nation-wide. The overall infant mortality rate for South Dakota is approximately 11% higher than that observed nationally. In 1993 none of the measures of neonatal or post neonatal mortality

for any racial group represented a new low record for South Dakota.

An examination of current causes of infant death in South Dakota (Table III) shows that compared to those nation-wide, rates of perinatal causes (short gestation, respiratory distress syndrome, intrauterine hypoxia/birth asphyxia, and other perinatal conditions) are lower than those observed nationally.^{1,3,12,13} Alternately the state's rates of death due to congenital anomalies, sudden infant death, pneumonia/influenza, and injuries/homicide are higher than the national rates.

As the specific causes of South Dakota's neonatal mortality over the past three years are explored, not surprisingly 61% of these deaths are due to "conditions of the perinatal period." Further analyses show that assuming that all of the newborns weighing less than 500 grams fail to survive, this group comprises nearly 36% of these deaths in South Dakota due to perinatal conditions.^{3,12,13} Among this group of extremely immature babies there is the rare survivor, but for the vast majority it is most unlikely that neonatal care will prevent death. Furthermore, most all neonatal deaths due to congenital anomalies are likely to represent babies with untreatable severe malformations. Between 1991-93 newborns with congenital anomalies comprised approximately 36% of all neonatal deaths in South Dakota.^{3,12,13} Assuming that congenital anomalies and birth weight less than 500 grams are independent causes of neonatal death, between 1991-93 together they contributed to 58% of all deaths of newborns in the state. In 1993 this was true of 73% of deaths of white newborns and 38% of the deaths of newborns of color.

Over the past several years South Dakota's neonatal mortality rate has shown a modest decline. This is noted in Figure 2. Of interest in interpreting this trend are the second set of data

also plotted in Figure 2 that portray an increasing rate of neonatal deaths due to birth weights less than 500 grams or congenital anomalies. These data show that this rate for South Dakota is higher than that observed nationwide. Though there are likely other explanations, it may well be that this is contributing to our relatively minimal rate of progress in decreasing neonatal mortality. This graph shows as well how many of the peaks and valleys of the states' neonatal mortality rates over the past 25 years are mirrored in the rates of deaths of these two groups

Table II
South Dakota and United States
Infant Mortality Rates

	Neonatal		Post Neonatal	
	South Dakota	United States	South Dakota	United States
	1991-93	1992	1991-93	1992
White	4.6	4.3	3.1	2.6
Color	7.6	9.2	9.6	5.2
Total	5.1	5.4	4.3	3.1

Rates per 1,000 live births

South Dakota 1991-92 data from National Center for Health Statistics, 1993 data from SD Department of Health; United States data from National Center for Health Statistics

Table III
South Dakota and United States
Causes of Infant Death

Cause of Death	South Dakota	United States	SD/US Ratio
	1991-93	1992	
Respiratory Distress Syndrome	0.43	0.51	0.84
Short Gestation	0.67	0.99	0.68
Intrauterine Hypoxia/Birth Asphyxia	0.03	0.15	0.20
Other Perinatal Conditions	2.11	2.18	0.97
Congenital Anomalies	2.30	1.83	1.25
Sudden Infant Death Syndrome	2.11	1.20	1.76
Pneumonia/Influenza	0.31	0.16	1.98
Injuries/Homicide	0.37	0.28	1.31
Total	9.4	8.5	1.11

Rates per 1,000 live births

South Dakota 1991-92 data from National Center for Health Statistics, 1993 data from SD Department of Health; United States data from National Center for Health Statistics

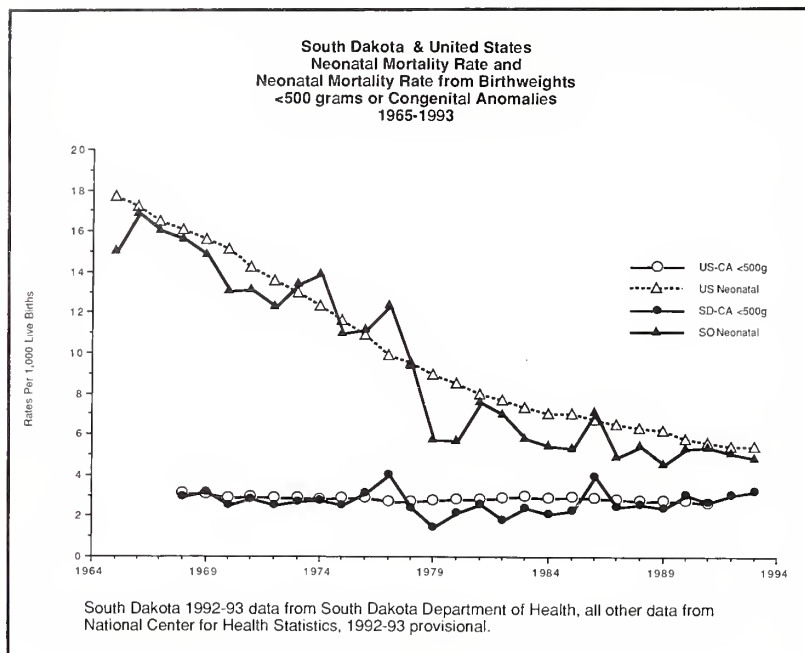


Figure 2

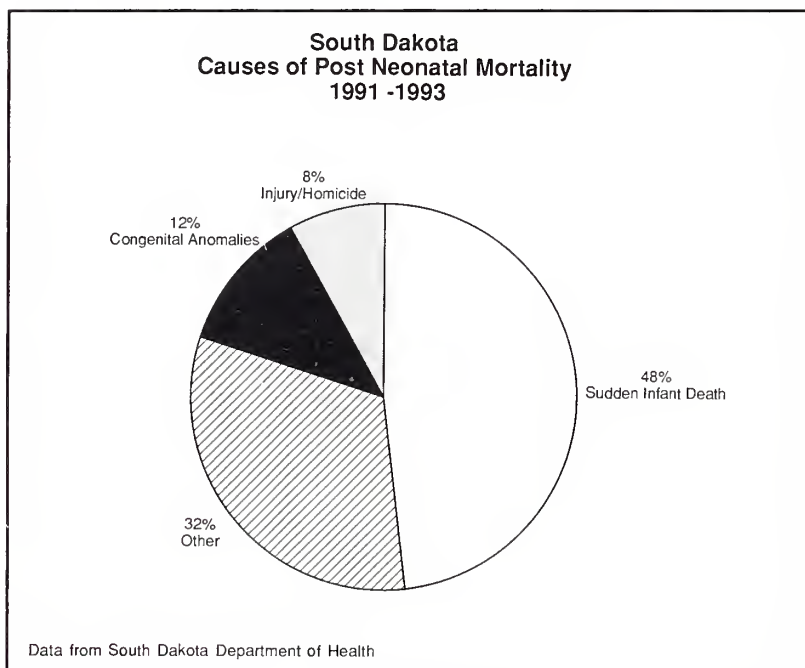


Figure 3

of newborns who, in all likelihood, are not viable at the time of birth.

An analysis of post neonatal mortality reveals a similar pattern with a large percentage of the causes of deaths that occur during this period of time unlikely being responsive to traditional pediatric care. The pie chart presented in Figure 3 shows that over the past three years 48% of post neonatal deaths are caused by Sudden Infant Death Syndrome. Aside from the management of perinatal risk factors, there is little

understanding of how this syndrome may be prevented. The second leading cause of death for this period of infancy is congenital anomalies that contributes to 12% of these deaths. The third leading cause that makes up 8% of these deaths is injury/homicide. For the past three years over two thirds (68%) of the approximate 46 post neonatal deaths per year in South Dakota may be attributed to these three causes.

These data on infant mortality highlight the need to examine causes of these deaths from a broad perspective that must attend to more than post natal pediatric care. Maternal-fetal care, environmental safety, and social concerns need attention as the goal of promoting a safe and secure infancy is pursued for the state's youngest and most vulnerable citizens. Parents, of course, play a significant role in assuring a healthy transition from conception through the first year of life. The maturity of parents greatly affects their ability to provide for this transition that represents a critical transition in their lives as well. Next to be considered in this report is the issue of teenage pregnancy.

TEEN PREGNANCY

A casual look through any source of lay media frequently reveals stories, graphs, or political statements regarding what often is conveyed as the burgeoning problem of teenage pregnancy in this country. These messages are often linked with information regarding the increasing prevalence of teenage sexual behavior. The social, moral, financial, health, and religious issues reflected in concerns regarding teen pregnancy are obviously emotionally laden, exceedingly complex, and well woven into the fabric of society's families and the intricacies of the interpersonal and emotional realities they represent. This report will not attempt to review these realities for our state, but will document with available data the trends that have been observed with teenagers and pregnancy.

A methodological issue becomes immediately apparent as this work begins. Unlike calculations of infant mortality that are based upon easily accessible data on the number of deaths per births, the calculations of the rates of teen pregnancy are dependent upon data on pregnancies per teenagers in the state.

Determining the number of pregnancies demands information on abortions as well as births. Though federal agencies provide data on abortions, they are not available in a timely format. Data from the state statis-

tics only include abortions that occur within South Dakota and thus are a conservative estimate of the total number. Data on spontaneous abortions are unavailable. For this reason, rate of births to teen mothers will be analyzed as they offer the most accurate data and allow an examination of the impact of mother's age on infant outcome.

In addition to data on births, these analyses also require data on the number of teenage girls in the state. Determining the population of teens is dependent upon Census data, Internal Revenue Service data that track moves of families in and out of the state, and mortality data. These data are difficult to acquire and for some time periods are either unavailable or limited in their descriptions of racial groups and specific age groups. This discussion will be based upon the best data available through the Business Research Bureau of the University of South Dakota.

Figure 4 presents data on the incidence of births to teen mothers 15 to 19 years of age in South Dakota and the United States.^{3,4,12-18,21-26} Recent news reports hailed the United States' 1992 decline in births to teenage mothers that is apparent in this figure. This decline was not mirrored in 1992 state data, though a decline was noted in the next year's rate. Of all 15-19 year old young women in South Dakota, 4.4% gave birth in 1993 compared to 6.1% of US teens in 1992.

More specifically, nation-wide there was a steep (20%) increase in the rate of teen births observed between the years of 1987 and 1991. During these years the pattern of births to teen mothers in South Dakota has not shown a similar rate of incline. Rather, the state's rate over the years of 1987 to 1991 increased approximately 7% and on average has been 21% lower than that noted nation-wide.

How the rate of births to 15-19 year olds varies for whites and American Indians is portrayed in the data presented in Figure 5. These data clearly show that the birth rates for South Dakota's American Indian 15-19 year old young women are much higher than those for Indians nationally.^{3,4,12-18,21-26} The opposite is true of whites. In 1990 the rate of 15-19 year olds having babies was 44% higher for whites nation-wide than it was for whites in South Dakota.

The question can be raised regarding the role of elective abortion in affecting the rates of birth to teenagers. Data available from the National Center for Health Statistics²⁷ show the 1990 abortion rate for South Dakota to be 10.1 per 1,000 15-19 year olds. This rate is among the lowest recorded for any state in the

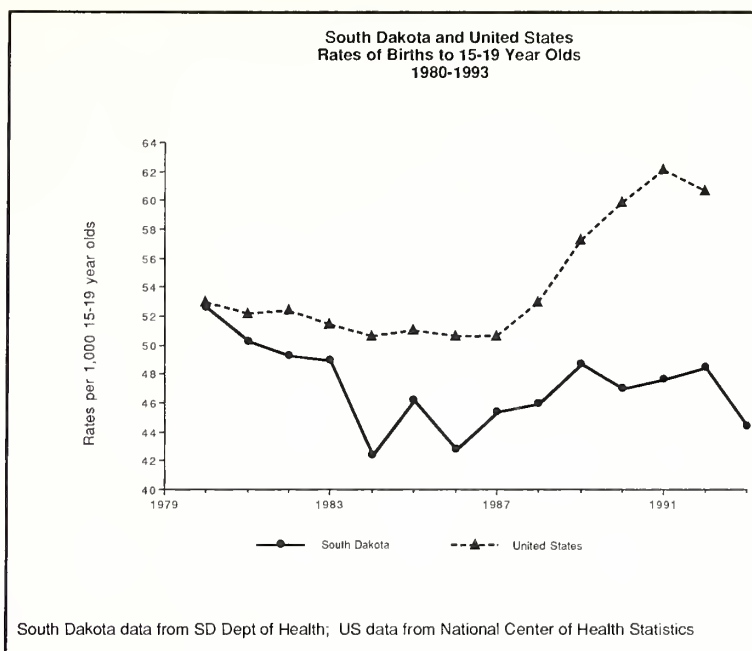


Figure 4

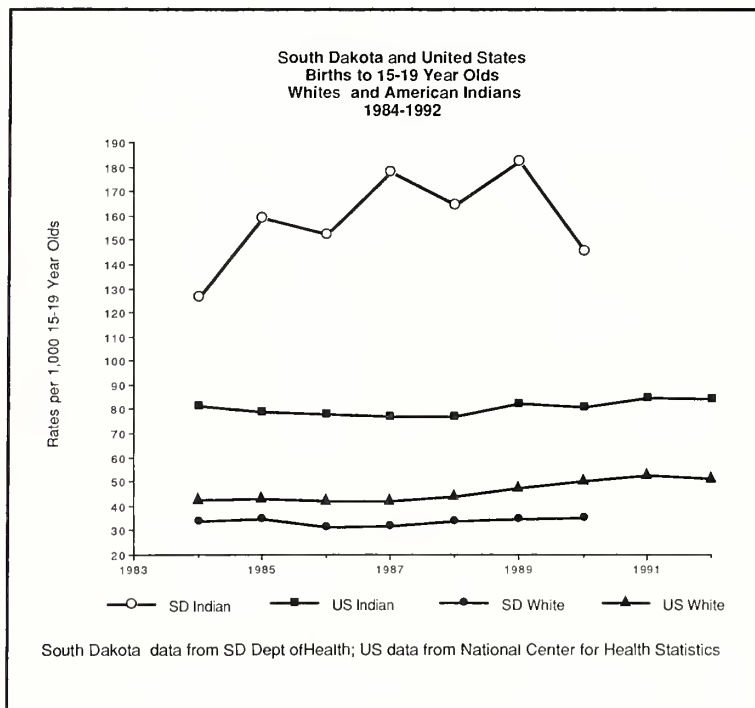


Figure 5

country and when added to the state's birth rate for teens in this age group enables a calculation of a pregnancy rate (56.9) for the state that was lower in 1990 than that of any state except North Dakota. Further, these nationally analyzed data show that between 1980 and 1990 South Dakota experienced a 15% decrease in its pregnancy rate for 15-19 year old young women.

These data describe pregnancies and births for teens 15-19, but there are also those younger than 15 years of age who also have babies. In South Dakota in recent years annually between 11 and 13 girls under the age of 15 have had babies (approximately 30% white, 70% American Indian) and five to six annually have had abortions performed in the state.^{3,12,13} While our birth

American Indian babies are born to teen mothers, less than this percent are low birth weight or die during infancy. More precisely, the rate of neonatal deaths for babies of teen mothers is significantly ($p < .05$) lower than that observed for older Indian mothers. This is not the case for white infants. While approximately 9% of all white babies are born to teen mothers, significantly more ($p < .05$) low birth weight newborns and newborns who die come from this sample of babies born to mothers less than 20 years of age than to older mothers.

Speculation regarding these findings offers a variety of explanations. Invariably the outcome for Indians as compared to white babies in South Dakota is portrayed with less favorable data. Yet, it appears that young maternal age does not contribute to an increased likelihood of low birth weight or infant death for American Indians while it does for white babies. Reasons for this could include that Indian women living on reservations or in Rapid City have access to a unified health care system regardless of their age or presenting concern. It could also be that younger American Indian women are healthier than those who are older and who may be more likely to have complicating chronic diseases. Social support may

Table IV
South Dakota
Percent of Births to Mothers Less than 20 Years of Age
and Perinatal Outcome
1989-1993

	White	American Indian	Total
% of Births to Teen Mothers	8.7%	24%	11.1%
Perinatal Outcome	White	American Indian	Total
% of Low Birth Weight Newborns Born to Teen Mothers	12.3%*	22.3%	14.2%
% of Babies Dying in Neonatal Period Born to Teen Mothers	14.2%*	14.9%**	14.4%
% of Babies Dying in Post-Neonatal Period Born to Teen Mothers	13.5%	23.4%	17.8%

Data from South Dakota Department of Health

* $p < .05$ - percent higher than that for infants of non-teen white mothers

** $p < .05$ - percent lower than that for infants of non-teen American Indian mothers

rate for this age group is currently approximately one third of that observed nationally,⁴ these very young mothers should not evade attention. Of interest, however, is the observation that in the late 1970s there were nearly twice as many girls less than 15 years of age having babies in South Dakota as there have been in recent years.⁸⁻²⁹

The long term outcome of infants and children born to teenage mothers has been the source of a great deal of national study and an examination of educational and social characteristics of this group of children in South Dakota is beyond the scope of this report. A review of several gross parameters of perinatal outcome for babies born to teen mothers in South Dakota is presented in Table IV.³ These data show that of all births in the state between the years of 1989 and 1993, 11% occurred to mothers less than 20 years of age. An examination of measures of low birth weight and infant mortality for these infants shows that babies born to teenage mothers are disproportionately more likely to weigh less than 2,500 grams at birth and to die in either the neonatal or post neonatal period. When these data are examined by racial groups important but differing patterns appear. Though 24% of all

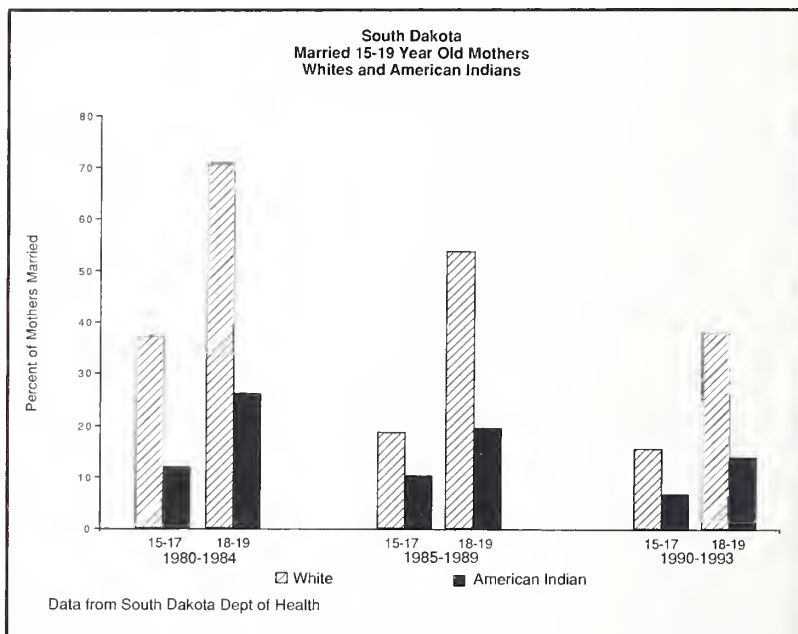


Figure 6

also be different for Indian and white pregnant teenagers and young mothers.

While marriage per se should not be interpreted to represent the availability of social support, data do

show a substantial decrease in teen mothers being married at the time of delivery. South Dakota data presented in Figure 6 show that over the past 14 years marriage in white 15-17 year olds having babies decreased from approximately 37% to 15%.³ For white 17 to 19 year olds having babies, marriage has decreased from 70% to 38%.

Teenage American Indians giving birth have over time been less likely than white mothers to be married, but for them as well the likelihood of marriage has decreased by approximately 50% over the years of the past decade.³ It may be, however, that for the Indian teenager who has a baby there is more extended family support than there is for the white teenager who now also finds herself less likely to be married. Speculation can ensue regarding how this may express itself in the data showing that teenage parenthood does not seem to have the same ill effects upon babies of Indians as it does on whites.

The genesis of a pregnancy uniquely involves more than one person, yet rarely is attention given to the fathers of these babies born to teenage mothers.³⁰ A glance at the 1992 national natality data quickly provides some information regarding this population of fathers.⁴ The 1992 rate of parenthood per 1000 for 15-19 year old young men is 24.6, which is 60% of the rate for young women this same age.²⁰ Obviously men older than the teenage mothers are the fathers of many of their babies. This observation was explored with the 1989-93 data from South Dakota revealing that indeed 69% of the fathers of babies born to teen mothers are no longer teenagers.³ As noted in Table V, in the case of girls less than 15 years of age, over 80% of the men who fathered their babies were at least 18 at the time of delivery. For those young women age 15-17 at the time of delivery, nearly half of the men with whom they conceived were over 19 years of age. For the 18-19 year old young women having babies, only 23% of their partners were their age or less.

Table V
South Dakota
Age of Fathers of Children Born to Mothers
Less than Twenty Years of Age
1991-1993

Age of Mother	Age of Father			
	< 15	15-17	18-19	> 19
< 15 years of Age	9.1%	9.1%	54.5%	27.3%
15-17 years	3%	15.8%	35.0%	49.0%
18-19 years	-	3.1%	19.7%	77.1%
Total	.1%	6.8%	24.2%	69.0%

Data from South Dakota Department of Health

Intriguing too are data showing a seasonal variation in the month of delivery of babies born to mothers under the age of 18. Not surprisingly in South Dakota a significantly higher ($p < .05$) number of white births (gestation greater than 37 weeks) to teenagers occur in the Spring than at other times of the year indicating that

conception is most commonly occurring during the summer non-school months. A similar pattern is not observed in data from American Indian teens or for white women older than 17 years of age.³ Between the years 1989-93 the peak month for births to white mothers, less than 18, was March. These trends have been observed in other states where data also show that teen mothers conceiving during the summer also have later access to prenatal care than do young mothers conceiving during the months when school is in session.³¹ Such observations further suggest the need for pregnancy prevention efforts timed to coincide with the events surrounding end of school year activities.

COMMENTS

The births of babies to teenage mothers reflect dynamics that sweep the social context of society. Most notable has been the recent national surge in the teen birth rate that occurred during the same years as efforts were mounted by federal administrations to promote abstinence. Prevention programs initiated through many different means did not accompany national declines in the teenage birth rate over the decade of the 1980s. Commentators suggest that the increase that has been instead observed may represent the reality that more pregnancies during these years resulted in more live births than had previously been the case due to changing teenage sexual experiences and variation in their access to and use of family planning and abortion services.³²

Reviews of teenage child bearing show that for the years 1985 through 1990 their public costs totaled \$120.3 billion, of which \$48.1 billion could have been saved if each birth had been postponed until the mother was at least 20 years old. Further, for every public dollar spent on family planning services for all women, an average of \$4.40 is saved.³²

Why is it that these births occur to young women so ill prepared to personally and financially care for their children? And why is it that teenagers are more likely than in the past to be engaging in sexual activity leading to pregnancy? Attempts to begin to respond to these difficult queries demand clarification of how trends with young women may be reflecting those of all of society. What confusing messages are we giving adolescents?

In society today the media is not in the least bit shy in its presentation of sexually laden images. These images rarely portray the importance of personal restraint or include messages regarding the importance of responsibility for sexual behavior or its potential devastating consequences. Further, the nature of relationships in which sexual activity occur are often conveyed as casual with marriage seemingly irrelevant. There also has been a clear increase in single parenthood across all age groups of women in our country, not just among teenagers.⁴ The group with the steepest increase in single parenthood has been that of women between the ages of 35 and 39. Specifically, during the years 1984 to 1991, the national rate of births to unmarried women 15 to 44 years of age has increased 46% or

approximately 7% per year. Relevant are data showing that over the past 30 years, rates of birth to 15-19 year olds have actually declined, whereas rates of births to single women these ages have increased.⁴

In addition, in South Dakota over two thirds of the births to teen mothers are also the births to fathers who are not teenagers. Rarely is attention given to this perspective.³³ Young women who conceive a child with a man three and a half years older than themselves have been shown to be more impoverished, more troubled, and more likely to be a high school drop out.³⁴ For these young women pregnancy may be a means to what may seem to be a better life. In addition, a 1992 study of 500 teen mothers found that two thirds of them had histories of sexual and physical abuse by adult men.³⁵ These women also tended to have more behavioral problems, greater promiscuity, younger age at first sexual experience, and to have partners averaging five to six years older than themselves. These observations demand that pregnancies of teenage women be viewed in the context that includes the perception that the fathers are frequently young adult men. Studies indicate that these men have more personal behavioral difficulties and to be in "developmental arrest" as manifest in their choice of teenage sexual partners.³⁶ We may just be in the beginning stages of understanding other dynamics that play themselves out as teenagers become pregnant.

Also of importance is recognition that teen birth rates reflect only those pregnancies that have not miscarried or been aborted, and that pregnancies occur only among sexually active teens. Nationwide, annually, approximately one million teenagers conceive, of these 14% miscarry, 35% have abortions, and 51% deliver (approximately three quarters of these unintended births).³⁷ Using the same formula for calculation, estimates of this distribution for South Dakota show that in 1990 about 16% of teen pregnancies end in miscarriage and 15% were terminated by abortion.

Nationally, the teen pregnancy rate has increased by 23% between 1972 and 1990 with this increase reflecting the rise in adolescents who have experienced sexual intercourse.³⁷ What also must be examined is the fact that nationally, over the past 20 years, pregnancy has declined by 19% for sexually experienced teenagers reflecting changing patterns of contraceptive use.³⁷

Of the teenagers who become pregnant and give birth, poverty is a pervasive experience. National data show that 56% of the teens who deliver come from families with an annual income of less than \$12,000, with only 17% coming from families with an income of \$25,000 or more.³⁷ In the years between 1986 and 1990 there has been a national increase (from 54% to 60%) in teenagers whose pregnancies end in birth rather than abortion. Nearly three quarters of higher income teens with unintended pregnancies have abortions with less than half of those from poor or low-income families terminating their pregnancies.³⁷ Unfortunately, the

role of poverty in teen pregnancy and births in South Dakota cannot be reviewed in this report.

In South Dakota, however, two thirds of male and female students report having had sexual intercourse by the time they graduate from high school. For males between 1991 and 1993 there was an increase from 9% to 11% who reported having had intercourse prior to age 13 and an increase from 16% to 19% who reported having had four or more sexual partners. Fifty-five percent of teens surveyed in 1993 reported using a condom with their last experience, showing an increase of 5% for females and 9% for the male from responses to this same question when asked in 1991.³⁸ While, the morality of teenagers having sexual relationships and their use of contraception may be debated with intense fervor, the reality exists that the majority are currently engaging in activity that may lead to pregnancy and serious sexually transmitted diseases including the deadly threat of an HIV infection.

Currently approximately 1200 teenage girls per year have babies in South Dakota but the birth rate for teens in the state is lower than that observed nationally. Clearly, the dynamics that are a part of this problem nation-wide are likely to be more attenuated in our state. Nonetheless, over 400 babies are annually born to South Dakota girls under the age of 18 who should be in the midst of high school experiences.

During the 1987 legislative session a bill was introduced mandating the teaching of a "family life" curriculum in each school district in South Dakota. Though the bill was withdrawn, the state formed a Task Force on School Health Education that included in its work the recommendation of what should be included in a quality comprehensive human sexuality program. The Task Force recommended that such programs should include information on: self esteem, development, family relationships, communication, decision making (factors involved in making decisions, physical and emotional consequences of sexual activity, the case for abstinence from sexual activity, birth control devices and methods), resources and support systems, and parent and community education.³⁹

Concerns about youth and sexuality surfaced again in the 1991 South Dakota Legislature that adapted a 1901 statute (SL 1901, Ch 113, Ch6, S6) to create the Statute on Moral Instruction (13-33-6). This new statute states:

In addition to other courses, special moral and character instruction shall be given in all public and nonpublic elementary and secondary schools in the state that is intended to impress upon the minds of students the importance of truthfulness, temperance, purity, sexual abstinence, AIDS instruction, public spirit, patriotism, citizenship, respect for honest labor, obedience to parents, respect for the contributions of minority and ethnic groups to the heritage of South Dakota and due deference to old age.

Values articulated in this statement are indeed values that are widely honored and respected. If abstinence, however, is not maintained, as appears to be the case for many teenagers, does society have a duty to assist them so that they may be sexually and reproductively responsible and prevent unwanted conceptions and sexually transmitted diseases? Strong beliefs and deep emotions accompany debate of this question. While this debate ensues, unless communities commit themselves to action, the dynamics that affect the lives of teenagers and the decisions they make will continue and they will profoundly affect future generations of our society.

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Hope you had a happy and blessed holiday and are looking forward to the new year with great expectation.

SDFMC continues to undergo changes directed toward advancing the Health Care Quality Improvement Program (HCQIP). Most of you are familiar by now with the emphasis and hopes of that program.

We look forward with anticipation to working with you in developing your own health care quality improvement programs at your hospital and hope we can help when possible.

Dr Bruce Lushbough, Principal Clinical Coordinator, is anxious for input from any or all hospitals and any or all physicians regarding the development of the improvement programs. This is, of course, a different avenue that HCFA has taken than in the past but one which is, in itself, an improvement. SDFMC will attempt to accomplish their program goals for South Dakota with your input and help.

SDFMC expects that providers will remain the best advocates of the patient so consumers can receive quality of care at a reasonable price.

Clinical Data Abstracting Centers (CDACS) have been established in two areas of the United States. HCFA anticipates information collected at the CDACS will be a major component of HCQIP. As we receive information on this venture scheduled for 1995, we will continue to keep you informed.

We compliment the physicians and hospitals in South Dakota on their excellent cooperation. We look forward to working with you in the New Year and are available to assist you in your efforts to ensure and improve quality of patient care in South Dakota.

Your humble servant,
Gerald E. Tracy, MD
Medical Director

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1995 - 1996

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Caring and the Health Professions

Becky Nelson, RN, MS, Mark Meyer, MD, Laurie Wiltz, MD, Jerome W. Freeman, MD

ABSTRACT

This study analyzes patient descriptions of what constitutes caring in the physician and nurse. We propose that health care students can be taught caring behavior through the use of patient narratives.

INTRODUCTION

Caring is recognized as a universal phenomenon that can characterize both professional and private relationships. Empirical studies have shown caring to be a powerful force in promoting health and recovery from illness or disabilities, and in fostering a sense of well being.¹ While caring is generally recognized as a vital part of the provision of health care services, it is a difficult concept to define precisely. Caring can be thought of as an interrelated group of behaviors, patterns and processes.² In nursing and medical schools, it is generally felt that students should develop and refine a disposition for caring. However, it is very difficult to know how best to characterize and teach caring behaviors in a fashion that insures that students possess a caring orientation and behavior, and continue to exhibit that behavior in the course of their professional lives.

The purpose of our study was to characterize specifically what constitutes caring behavior from the perspective of patients. It is our belief that by using patient narratives to demonstrate the nature of caring in the patient's voice, medical and nursing students can be more effectively taught caring behaviors that will persist in their professional lives. We contend that the development of a caring disposition has special relevance in preparing the caregiver to deal with the ethical/value issues that abound in the clinical setting.

METHODS

This study was carried out, over a two year period, in a 470-bed tertiary care teaching hospital in an upper midwest community. The study was accomplished in two phases. In the first portion, patients' perceptions of nurses' behaviors were analyzed. The interviewer (BN), a nursing administrator, conducted all of the discussions with patients. In the second portion of the study, two fourth year medical student interviewers (MN and LW) used a comparable, non-directive interview style in an effort to get patients to describe caring

behaviors which they had perceived in their physicians. Twelve patients were interviewed for each section of this study. All were interviewed using a non-directed interview style, with the same open-ended question posed to each patient. In the first group, the patients were asked to identify and describe what a nurse had said or done to them to make them think that the nurse cared about them. In the second portion of the study, an identical question was asked about what a physician had done to make the patient think that the physician cared about them. The interviewers carefully attended to the patient responses, taking extensive notes. Immediately following the interview, the interviewers dictated a detailed summary of the patient responses. These dictations were transcribed for later analysis.

The methodology of this study was a descriptive, phenomenological approach which is a qualitative method of research. Qualitative research is an inductive, hypothesis-generating method of inquiry. The goal of such phenomenological research is to understand human experience as it is lived and described by the individual experiencing the phenomenon.³ The four authors of this study rigorously analyzed the patients' responses in order to identify and categorize recurring themes. In the discussion that follows, a sampling of patient narratives will be utilized to demonstrate recurring themes.

RESULTS

The patients described certain behaviors that were common to both the physician and nurse groups. The sense of being the **first in importance** was identified by the patients as evidence that both the "doctor and nurse cared about me". They reported that both physicians and nurses treated them as if they were people rather than objects and had the interests of the patient in mind over their own.

A professor of a local college had incurred a fractured femur in an automobile/bicycle accident. His plan of care was traction for six weeks

so he was anticipating a long time in bed. The prospect was distressing to him. Initially he was very concerned about the mechanics of his traction because he knew that without it operating properly the likelihood of his improving as he should would be minimal. The patient stated the most caring example of nursing was when his nurse recognized he was an educated man and needed thorough explanations. The nurse brought in a drawing of the physics of traction and called in the orderly to explain the principle behind the weights and pulleys. "Then she said this to me, 'Now, I've explained all this to you because I know how much you have been watching and worrying about the traction. Sometimes a person needs to understand how something works, especially when it's going to be required for quite awhile. It's important you know the weights need to hang freely. But you also need to know that you are not responsible for the traction working properly. We watch it very closely. Sometimes you won't even be aware that I am observing it or checking it. You can sure give me a call anytime you think something is out of order but you are not responsible for it. That is what we are here for.'" That meant so much to me. Here is a nurse who cared enough about me to understand where I was coming from and made the effort to relate to me as an individual not just another patient with traction."

Patients identified that their sense of being "first in importance" increased when nurses and physicians gave of their time. Both types of caregiver were perceived as being very busy and when either professional made time for the individual, patients felt this was indicative of a caring person.

A patient described how he felt when his physician came into his room to see him in the morning and was very knowledgeable of the events during the night. "I could tell he had checked with the nurses and had taken the time to read my chart so he knew what was going on. He obviously cared enough about me not to come in and fumble around."

Other patients related incidents about physicians who took the time to establish a relationship with a patient before they would "get down to business". A number of these stories about physicians included such behaviors as the physician sitting on the edge of the bed and talking about inconsequential things such as the weather or about their families. Such types of casual conversations seemed to give patients the impression that they were important enough for their physicians to devote special time to them.

One 74 year old woman described her feelings when she was in the hospital for two weeks with metastatic breast cancer and her physician made her feel she was his only patient. She said he took the time to talk with her and explained things to her in such a way that she could under-

stand and she didn't feel at all rushed. She felt he had as much time as she needed and that he didn't need to run off to see other patients — indeed he conveyed the sense that he could spend all day with her if she needed it.

Another patient's story illustrated the concept of putting the individual first in a unique way:

"A sure sign of a nurse caring about me happened yesterday. I am a very private person and it was difficult for me to have my urine bag hanging on the side of the bed for everyone to see, especially when you know what it is. I had company and the nurse came in to empty the bag to measure it. She walked in with the pitcher in hand, saw my company and said she would return later to do what she needed to do. I was so impressed that she knew and cared enough about me to not draw attention to my bag and come in later to do it. I thanked her later for doing that and told her how much it meant to me. She said she knew it might bother me. For her to rearrange her schedule to keep an old man like me happy is truly a sign she cares."

Both groups of patients noted that being informed and taught by their physicians and nurses gave them a sense of being cared about. This allowed them to participate in the decisions regarding their care.

A patient told of an experience he had when the physician knew that he was going to have to do an amputation of his right leg but told him that he would not take it off until he was ready to have it off. "He told me the decision was totally up to me and I felt like I had some say in the matter."

Another patient described how important it was to her that her physician came in to inform her of the plans he was making. During his visit he sat down and talked with her about the plan for the following week. On Monday, a search would begin for a nursing home in her hometown. On Tuesday, the staff would begin to get her up and moving. The physician went on to describe the rest of the week telling her the plan for her discharge from the hospital and moving back to her home after her stay in the nursing home.

Both nurses and physicians were cited as caring when they drew pictures of the patients' pathophysiology to help them better understand their illness and what it meant to the patient.

One patient shared a story about the time her physician drew a diagram of her heart on the chalk board and explained what was going on and the risk it posed. He actually advised her against doing anything interventional at that time because she had lived with the problem since she was born and it hadn't impeded her life that much to this point.

A nurse drew a diagram of the male urinary tract along with the mechanics of the irrigating system so the patient was knowledgeable of the need for the catheter and why the patient was experiencing spasms.

Nurses clearly have a pivotal role in teaching patients. This teaching frequently takes the form of interpreting and reinforcing the information which physicians had provided to patients. This was described by some patients as a distinct caring behavior.

One patient stated "my doctor came in and out and explained what was happening to me and sometimes I had trouble understanding exactly what he was saying. The nurses were right there listening and they understood and then re-explained it so I could understand what it meant for me. They helped me get a complete picture of how long I might be in traction and if I'd need to have surgery".

Patients indicated that including families in patient-teaching efforts was an important way in which physicians and nurses demonstrated caring. Patients remarked that they felt that including their families in these discussions indicated that the physician and nurse cared about all aspects of their lives and not just their disease. When describing the importance of including the family, one patient made this statement:

"When my physician talked to my family it really helped because when the family knew what was happening, it made me feel more relaxed. It showed he was not only concerned about my problem but about my life and my family."

Another example depicting caring through interactions with a family member was described in the following way:

During the night the patient experienced an arrhythmia which caused him to be placed on a monitor and watched very closely. The nurse talked to the patient about it not being serious enough to call his wife and they both knew she would be coming to the hospital in the early morning. The patient recalled how the nurse showed caring about both of them by the way she explained what happened to his wife. "I knew my nurse was watching for my wife to arrive so she wouldn't come into my room and become alarmed when she saw the monitor. When Doris came, the nurse brought her to the bedside and sat with both of us. She had a drawing of the pathway of the heart and she showed us where mine had gone wrong. She then showed how the medicine would correct it. When she was through we both had a real understanding of what was going on. The best we had ever had."

A distinctive caring behavior noted throughout the patients' descriptions of physicians was the human approach and the willingness to "talk to them as

a person" rather than as physician to patient. Openness and honesty were also cited as characteristics of caring about the patient. "Using nonprofessional terms" was noted as important along with a friendly tone of voice. When physicians showed a willingness "to be themselves without any pretense and to be at the same level as the patient", the physicians were viewed as being more approachable.

One patient told of an experience that led him to believe that his physician truly cared about him because the physician was willing to share a part of himself with this patient. The physician entered the room one morning and the patient sensed that the doctor was "down and blue" so the patient suggested that the physician come and sit on the edge of the bed and talk a bit. The physician first asked how the patient was doing and inquired about his family and personal life. Then the physician shared thoughts about his own life. The patient said he discovered more about the physician than he'd ever known. The fact that the physician was willing to open up about himself a little meant a lot to the patient. It made the patient feel that the physician cared enough to share.

Another patient stated that her "physicians didn't put themselves on a pedestal and they recognized that we are all created equal and we need to respect each other as human beings."

The theme of a human approach and the relating to patients at their level was not evident in the descriptions of caring behaviors of the nurse. This phenomenon appeared to be common only to physicians.

There was a recurring description of a sense of presence associated with the nurse's caring behaviors that did not emerge in the same fashion for physicians. The feeling of security when the nurse was at hand or in attendance should the patient need anything was related by patients as a strong indicator the nurse cared about them.

One patient reflected on the first nights following a procedure where the nurse was in his room at all odd hours, checking his blood pressure and the circulation of his leg. He had been told he might have some bleeding and the nurse was always in seeing if his dressing was dry. He stated that he never had to worry because he was confident the nurse was keeping track of everything for him.

Another patient told of her nurse coming into her room with a flashlight to look over everything. Even when there was no need to wake the patient, the patient often knew that the nurse was at the bedside watching over her.

CONCLUSIONS

Our data demonstrate that patients regularly identify certain behaviors as constituting examples of caring.

The sense of being treated "first in importance" was frequently mentioned. Also, patients stressed that being informed and taught by their physicians and nurses exemplified caring. The nurses' role was perceived to be pivotal in that the nurse frequently interpreted and reinforced information that a physician had provided. An example of caring especially evidenced by nurses was a "sense of presence". Physician behavior described as signifying caring included instances of a physician talking to the patient on a personal level rather than in a more formal "doctor-patient" approach. We feel that the specific examples provided by patients are instructive in terms of revealing the type of behaviors that patients actually value as demonstrating caring. As our data were analyzed, we were particularly struck by the possibility that the types of stories which these patients articulated might be excellent teaching tools for students in the health professions. Specifically, it seemed to us that students might readily internalize these contextual examples and develop a disposition for caring. This might prove more effective than trying to teach the student to adopt such a disposition using more traditional, didactic analyses of what constitutes caring behavior. A particularly striking example of such narrative, in our opinion, was the story about the nurse who deferred emptying the urinary bag while visitors were present. This example of caring seemed to profoundly affect the patient. In our opinion, a brief specific example like this can be very effective for demonstrating what actually constitutes a caring approach to an individual patient.

In our judgment, the issue of caring is very closely related to the many ethical/value issues that pervade health care today. While such ethical dilemmas have been traditionally analyzed from the standpoint of basic ethical principles, Pellegrino, among others, has stressed the importance of virtue ethics.⁴ What is ultimately decided in health care often depends finally on the character and good will of the health care professional. In the face of ethical dilemmas in health care, the physician and nurse invariably play major roles in decision making.

While virtue and character are thus construed as vitally important attributes of the caregiver, it remains very difficult to define what virtue and character mean and how they should be taught. We believe that in an operational sense truly caring behaviors are, in fact, a demonstration both of a focused concern for the patient and a demonstration of inherent virtue/character on the part of the caregiver. Thus the analysis and internalization of caring behaviors via stories/narrative may be a pragmatic method for attempting to help develop virtue and character in the caregiver. As such, a study of caring behaviors certainly has great potential significance for schools of medicine and nursing, as well as for the continuing education of health care professionals.

Our study has focused on specific narrative accounts by individual patients. It should be noted that not only are specific patients' stories a very effective way to teach about caring, but also works of literature (such as fic-

tional narratives and poetry) can provide the nurse and the physician with insight regarding the patient's plight, the need for caring and notions of duty. The personal poignancy and heroic mien of such narratives can be readily internalized by the caregiver. Lessons learned from such stories can be easily recalled and utilized. The moral lessons found in such specific narratives may have more force and direction than abstract principles or directives taught in a traditional didactic setting.

This point is made very effectively by Thomas Shaffer. He notes that morals begin in stories. He effectively uses the example of Atticus Finch from Harper Lee's *To Kill a Mockingbird* to show how a narrative hero can influence behavior. Shaffer notes: "In terms of morals, we come to know about Atticus in the way we learn most of what we learn about how to behave, about goodness and good people, and that is more a matter of stories than it is a matter of moral principles". Shaffer also notes that "the way we grow up morally, and in other ways as well, is by listening to and living out stories".⁵

Caring lends itself to stories, be they actual patient narratives or fictional accounts. The use of story may well be the key to understanding and improving caring behaviors among health professionals.

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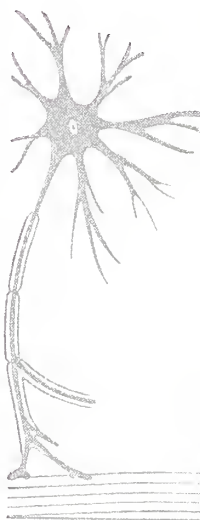
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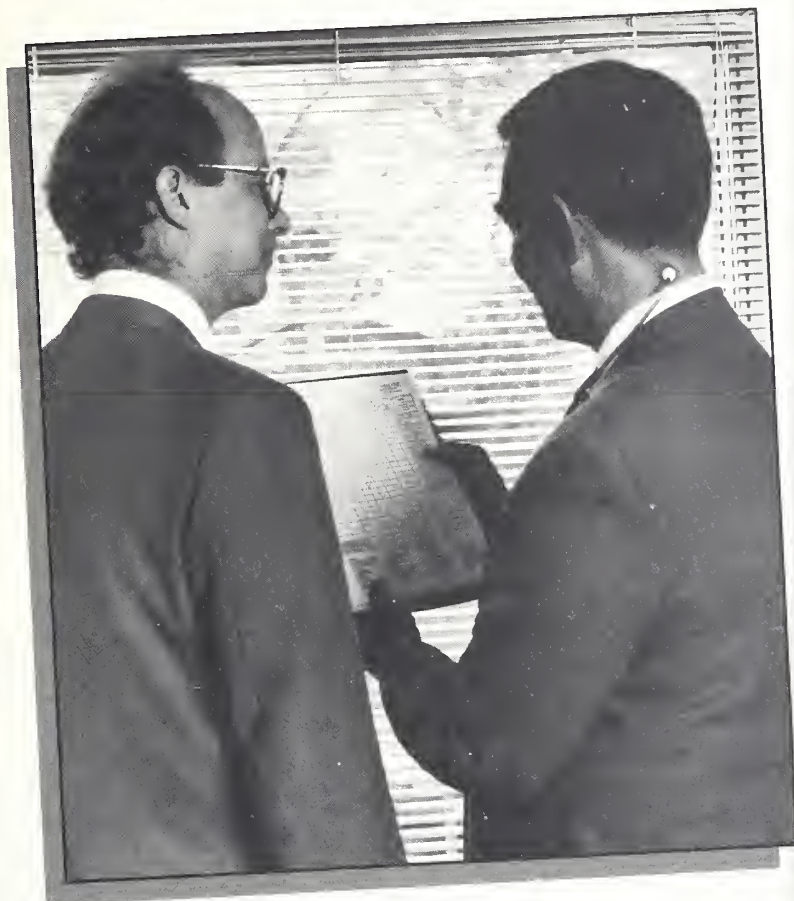
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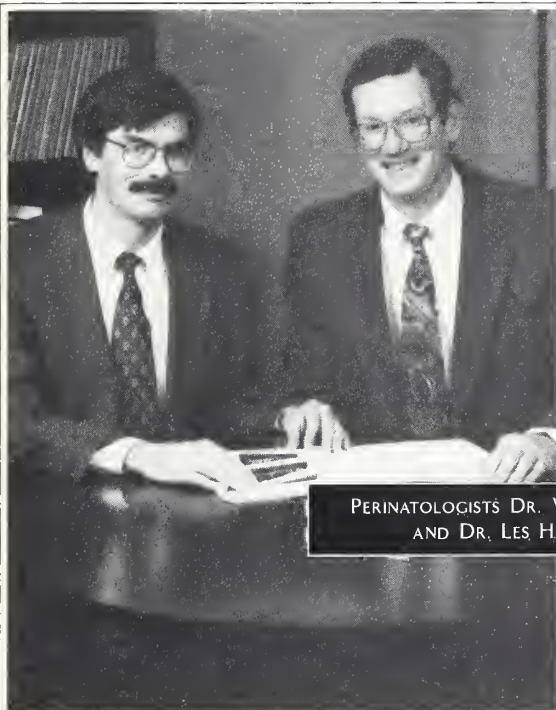
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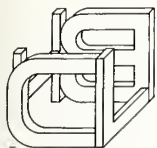
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Council Meeting Highlights

The Council of the State Medical Association met on Friday, November 18, in Pierre, South Dakota. Highlights from that meeting are as follows:

1. **ANNUAL MEETING REGISTRATION**—The Council decided that registration for the 1995 annual meeting will be one fee for the entire package. No individual tickets will be sold except for the AMA-ERF and SoDaPAC events.
 2. **LEGISLATIVE ISSUES FOR THE 1995 SESSION**—The Council voted that SDSMA sponsor the following legislation:
 - a) to protect physicians when they share and disclose information relevant to potential criminal activity.
 - b) a definition of surgery.
 - c) a patient protection act which allows patients to select their physician on a non-punitive point of service basis.
 - d) an amendment to South Dakota law that would exempt physicians from obtaining a second opinion when prescribing psychotropic drugs to patients in psychiatric facilities.
 - e) to regulate the practice of medicine or osteopathy through electronic means by nonresidents and endorse the following legislation:
 - a) amendments to the Uniform Anatomical Gift Act so it conforms to other states' laws.
 - b) to require certification for utilization review agents.
- and to oppose the following legislation:
- a) any bill that would allow nurses/nurse practitioners to practice independently.
 - b) drug legislation which prohibits discriminatory pricing of drugs by manufacturers and sellers.

3. **ELECTION OF HONORARY LIFE MEMBERS**—Dr. T. J. Wrage, Jr, Watertown was elected to honorary life membership in the SDSMA.

The next Council meeting will be held in Sioux Falls on Friday, March 31.

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Contraindications: Renal diseases, and patient's sensitive to the drug. In view of the limited and inadequate information at hand, no precise tabulation can be offered of additional contraindications.

Warning: Generally, this drug is not proposed for use in females and certainly must not be used during pregnancy. Neither is this drug proposed for use in pediatric, geriatric or cardio-renal patients with gastric or duodenal ulcer history. Nor should it be used in conjunction with mood-modifying drugs such as antidepressants, or in psychiatric patients in general.

Adverse Reactions: Yohimbine readily penetrates the (CNS) and produces a complex pattern of responses in lower doses than required to produce peripheral a-adrenergic blockade. These include, anti-diuresis, a general picture of central excitation including elevation of blood pressure and heart rate, increased motor activity, irritability and tremor. Sweating, nausea and vomiting are common after parenteral administration of the drug.^{1,2} Also dizziness, headache, skin flushing reported when used orally.^{1,3}

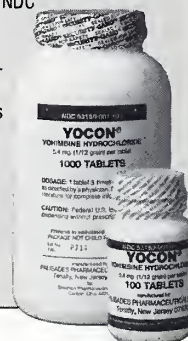
Dosage and Administration: Experimental dosage reported in treatment of erectile impotence.^{1,3,4} 1 tablet (5.4 mg) 3 times a day, to adult males taken orally. Occasional side effects reported with this dosage are nausea, dizziness or nervousness. In the event of side effects dosage to be reduced to 1/2 tablet 3 times a day, followed by gradual increases to 1 tablet 3 times a day. Reported therapy not more than 10 weeks.³

How Supplied: Oral tablets of Yocon[®] 1/12 gr. 5.4 mg in bottles of 100's NDC 53159-001-01 and 1000's NDC 53159-001-10.

References:

1. A. Morales et al., New England Journal of Medicine: 1221, November 12, 1981.
2. Goodman, Gilman — The Pharmacological basis of Therapeutics 6th ed., p. 176-188. McMillan December Rev. 1/85.
3. Weekly Urological Clinical letter, 27:2, July 4, 1983.
4. A. Morales et al., The Journal of Urology 128: 45-47, 1982.

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SOUTH DAKOTA



**Helen Owens, President, South Dakota
State Medical Association Alliance**

*Who will make the city joyful
Who will wipe away its tears?
Who will fill the streets with gladness
Who will calm the old folks' fears?
Who will tell the children stories
Who will make their clear eyes gleam?
Who will sit among the flowers
See the sun and sky above?
Who will make the city joyful
Who will make us laugh and love?
Maybe mothers loving babies
Maybe gentle eyes that see.
Or beyond the other maybes
Maybe you and maybe me.
James Kavanaugh*

The South Dakota State Medical Association and the Alliance have entered into a partnership to address a public health emergency in our state-the tragic and escalating problem of family violence. Family violence is as life threatening and complex as any killer disease. The only cure for this "disease" is to educate the public and support the victims. With your help, we intend to do this. In the coming months, I will be sharing with you the specifics of our campaign. This month I want to share with you some information from the AMA Alliance Family Violence Project.

JANUARY 1995

How is family violence defined?

Violence is the use of force by one family member with the intent to inflict injury-emotional or physical-or death upon another family member. The consequences of such violence are not just immediate and physical. For most victims, the resulting psychiatric and emotional problems seem never ending.

Who are the victims of family violence?

Almost anyone can be the victim of family violence-children, adolescents, parents, grandparents, men and women.

Who are the victimizers?

Potential abusers come from all economic, racial, ethnic and religious groups. They can be male or female, adolescents or adults. Consider these facts.

- Three siblings in 100 use weapons on sisters or brothers, meaning that 100,000 children in the United States annually face brothers or sisters with guns or knives in hand.
- Six out of 10 couples have experienced violence at some time during their marriages, with either husbands beating wives or vice versa.
- Approximately 900,000 parents are beaten or abused by their children each year.
- Child homicide is now among the five leading causes of death in childhood, with the majority of infant victims killed by parents, relatives and older children.

What factors contribute to family violence?

Stress is often a cause of violence. Crises such as losing a job, financial difficulties, marital conflicts, drug or alcohol dependence, illness or the increased dependency of an aging relative can all lead to family violence.

How can you tell if someone is a victim?

The signs of violence can vary depending on the type of abuse inflicted and the victim's position in the family.

Children. Among the signs of child abuse are repeated injuries for which unlikely explanations are given by parents or caretakers; passive or withdrawn behavior on the part of the child; disruptive behavior on the part of the child; or neglected appearance.

Adults. Signals of spouse abuse include reluctance on the part of the victim to spend time with friends and family; unlikely explanations for repeated injuries; increased use of drugs or alcohol; and an obsessive or overly possessive spouse.

The Elderly. Among the signs of elder abuse are frequent bruises, welts, lacerations, or burns; difficulty in sitting and walking; insecurity, distrustfulness and disorientation. Victims may also appear dirty, malnourished and generally neglected.

Helen Owens

AMA Physician Recognition Award

Congratulations to the physicians in South Dakota who have earned the AMA Physician Recognition Award in the months of July, August, October and November, 1994.

July

Barbara R. Fetters, MD*
John L. McFee, MD*

Hot Springs
Bowdle

Peter J. Nicholson, MD*
Richard A. Wake*

Wagner
Brookings

August

Barbara A. Hall, MD*
Richard P. Holm, MD*

Sioux Falls
Brookings

Shrirang M. Lele, MD*
K-Lynn Paul, MD*

Huron
Sioux Falls

October

Lawrence L. Rentschler, MD

Dell Rapids

November

James R. Schuft, MD*

Fort Meade

Patsy A. Uken, MD*

Sioux Falls

*members of the South Dakota State Medical Association

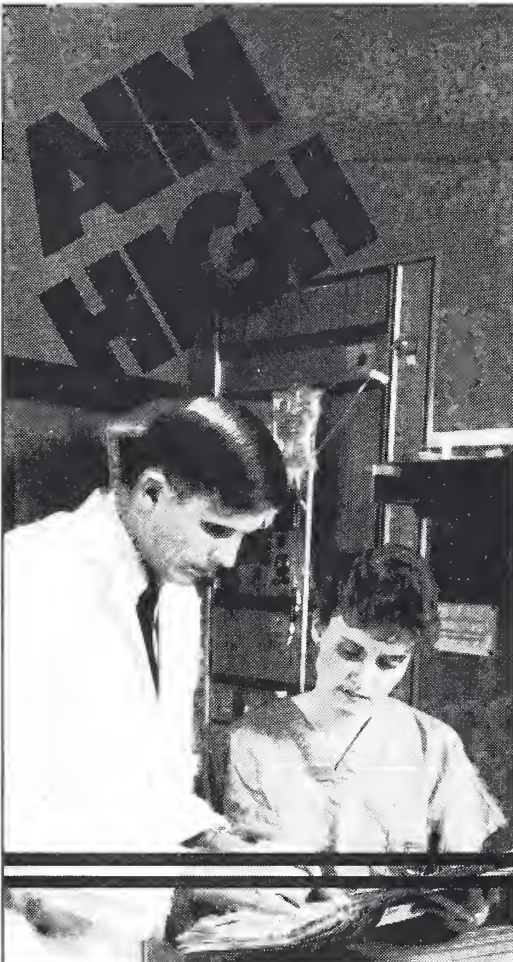
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Medication Errors: Decreasing Their Incidence

Jodi Rylance Heins, Pharm.D, Sioux Falls, SD

The problem of medication errors involves many disciplines including pharmacies, physicians, physician assistants, nurses, supportive personnel, pharmaceutical manufacturers, patients and their caregivers and others.¹ Both experienced and inexperienced personnel commit errors. Lack of knowledge, substandard performance, mental lapses and defects or failures in systems have all been cited as causes of medication errors in all areas including dispensing, prescribing, administration and patient compliance.¹

Fortunately, many medication errors cause minimal to no adverse consequences. However, some errors tragically do result in serious adverse effects to the patient. It is these significant and serious consequences that makes the issue of medication errors very important. Safeguards have been developed to help decrease the incidence at all levels of drug distribution and delivery. A detailed discussion of all areas would be lengthy. Therefore, this article will be limited to a discussion of issues that pertain to the prescribing of medications.

Look- and sound-alike drugs are one of the most common factors leading to potential drug errors. As the number of medications on the market continues to grow it becomes harder for manufacturers to develop unique names for their products. Examples of this include Prozac/Prilosec, acetazolamide/acetohexamide, chlorpropamide/chlorpromazine, quinine/quinidine, Xanax/Zantac,² Eldepryl/enalapril,³ Stelazine/selegiline,⁴ Lotrimin/Lotrisone, Norvasc/Navane and Zoxyn/Zofran.⁵ To complicate this matter even further, many of these medications are available in the same strengths and dosage forms. One possible way to help decrease the incidence of these types of errors would be to include an indication in the medication orders i.e. quinine 325 mg po hs- for leg cramps.

The use of zeros can also lead to confusion. A zero should always precede a decimal point when a number is less than one, i.e. 0.5 mg. However, a zero should never follow a decimal point, i.e. 5.0 mg. In many cases, these types of errors may be caught due to the 10 fold error in dosage. However, some dosages would not be considered unreasonable. Examples of this are warfarin .5 mg could be interpreted as 5 mg or warfarin 1.0 mg could be interpreted as 10 mg.

Abbreviations are another problem prone area. The use of non-standard abbreviations for drug names can lead to confusion. For example, AZT could be azathioprine, zidovudine, or aztreonam, and the use of norflox for norfloxacin has been confused with

Norflox.⁶ Also the abbreviation of the word units to "u" has lead to numerous errors. In this situation, a sloppy "u" can look like a zero and an order for 2u could be interpreted as 20.

In addition to the point mentioned above, it is also important to keep in mind a few more general principles. Medication orders should be complete and legible. They should contain the drug name, dosage form and strength, route, amount to be dispensed and complete directions. When writing for a quantity to be dispensed the use of terms such as "one vial" should be avoided due to the availability of multiple vial sizes in many situations. Complete directions are also important to help in patient counseling and to differentiate look- and sound-alike drugs.

Medication errors are a problem all health care providers need to be concerned about. The application of these principles should help decrease the incidence of medication errors.

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1. American Society of Hospital Pharmacists: ASHP guidelines on preventing medication errors in hospitals. *Am J Hosp Pharm* 1993;50:305-314.
2. Cohen MR, Davis NM: Dispensing the wrong medication. *Am Pharm* 1992;NS32:28-29,32.
3. Malcom KE, Hogan TT, Wyatt TL: Is the prescription really for selegiline? *Am J Hosp Pharm* 1994;51:930.
4. Alldredge BK, Heard SE, Parko K: Is the prescription really for selegiline? *Am J Hosp Pharm* 1994;51:930,932.
5. Davis NM, Cohen MR: Avoiding medication mix-ups. *Am Pharm* 1994;NS34:17,72.
6. Pincus JM, Ike RW: Norflox or norflex? *N Engl J Med* 1992;326:1030.



SDSU

Edited by Brian Kaatz, Pharm.D.



South Dakota Society Of Pathologists



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REFERENCES: Should be listed in the order in which they appear in the article and should not be more than 20. They should be complete and accurate and include the authors' names and initials, title of article, abbreviated name of Journal, volume number, pages and year of publication. References to books should include authors, title, location and name of publisher, year of publication, edition and page numbers.

ILLUSTRATIONS: Satisfactory photographs or drawings should be supplied by the author. Each illustration, table, etc., should bear the author's name on the back. Photographs should be clear and distinct 5"x7" glossy prints. Drawings should be made in black India ink on white paper. Used illustrations are returned after publication if requested.

The contact person at the Journal office is Jeri Spars, (605) 336-1965.

This is Your Medical Association

Arlington physician, **Donald Scheller**, died December 3, 1994, at the age of 74. After his first 2 years of medical school at the University of South Dakota in Vermillion, he received his medical degree in 1943 from the Temple University in Philadelphia. He then completed an internship at Broadlawns Hospital and his residency at Iowa Methodist Hospital. He practiced medicine in Arlington for 38 years.

Dr George W. Wyatt died October 9, 1994, at his home in Sioux Falls, at the age of 70. He was born in 1924, in Amarillo, Texas. He graduated from Tulane Medical School in New Orleans, in 1947, earned a rotating internship at Charity Hospital in New Orleans and received his obstetrics-gynecology residency training at the University of Utah Medical School, Salt Lake City.

Clifford Lardinois, MD, Huron, died October 13, 1994, at his home. He was born June 9, 1919, in Milwaukee, Wisconsin. He grew up in Green Bay. He received his medical degree from the University of Wisconsin in Madison in 1951. He completed his internship and his residency in pathology at Brooke General Hospital in San Antonio, Texas.

Roy C. Knowles, MD, Sioux Falls, died on October 22, 1994, at the age of 80. He was born December 8, 1913 in Aberdeen. He graduated from the University of Alabama, Tuscaloosa, in 1936; Albany Medical College, Albany, NY, in 1940; Menninger School of Psychiatry, Topeka, Kansas, in 1951; Southard School, Topeka, in 1952; and Wilder Child Guidance Clinic, St. Paul, MN, in 1969.

Yankton doctor, **Melford B. Lyso**, 75, died December 8, 1994. He was born Nov 11, 1919 at Red Elm. He received his medical degree from the Southwestern Medical School of the University of Texas, Dallas, in 1951, and received his internship in Yankton. He began his practice in Yankton, in 1952.

The new medical director of the St. Luke's Midland Regional Medical Center Emergency Department, in Aberdeen, is **Dr Marlin Lamb**. Dr Lamb is a board certified family practice physician with 11 years of experience in emergency medicine. He also serves as medical director of Careflight and Aberdeen Advanced Care. He is president of the South Dakota Chapter of American College of Emergency Physicians.

At the recent South Dakota Rural Health Conference, **Dr Tom Dean** of Wessington Springs received the Dr Robert Hayes Memorial Award, which recognizes the state's "outstanding rural practitioner". The award is presented by the South Dakota Academy of Physician

Assistants in honor of Dr Hayes, who practiced in Wall, SD for many years, for developing South Dakota's first network of satellite clinics staffed by physician assistants and nurse practitioners.

John Adams, MD, internal medicine specialist in Aberdeen, has achieved board certification from the American Board of Internal Medicine.

Richard Porter, MD, Fort Meade, was recertified by the American Academy of Family Physicians following successful completion of the exam given in July, 1994.

Rosco E. Dean, Jr, MD, Wessington Springs, has received a USD Alumni Achievement Award during the 81st annual Dakota Days celebration. Dr Dean, a native of Wessington Springs, was honored for outstanding contributions to the community. He spent more than 40 years in medical practice in his hometown and was instrumental in forming the state's first Emergency Medical Service Organization. He has been widely recognized for his leadership in improving rural medicine in South Dakota and nationwide, and for his work to improve the health conditions among the Native Americans. He was adopted into the Crow Creek tribe in 1967. His many awards and citations include induction into the South Dakota Hall of Fame in 1993.

Dr Kelly E. Vaughn-Whitley, a cardiologist who practices at the Rapid City Medical Center in Rapid City, has been elected to fellowship in the American College of Cardiology. The designation is granted to cardiologists who successfully complete the requirements of the board of trustees of the College.

Edward L. Adams, IV, MD, an orthopaedic surgeon practicing at the Dakota Bone & Joint Clinic in Mitchell, has received certification from the American Board of Orthopaedic Surgery and that he is now a diplomate of that organization.

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CME Conferences

CME Conferences being held on a regular basis at various health care facilities throughout the state of South Dakota.
(1 hour AMA Category 1 credit available unless otherwise specified)

CME CONFERENCES

JANUARY 1995

- January 17 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- January 18 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Kirk H. Wheeler, MD, Topic: Appendicitis, Info: David Rossing, MD, 331-3490.
- January 18 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Clinical Pathology Conference, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- January 18 **Geriatric Forum** - 7:00 am, RDT Network Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- January 18 **Topics in Clinical Medicine - Audio Teleconference Series**; - 12:15 & 1:30 pm CT/CDT, 11:15 am & 12:30 pm MT/MDT; Speaker: Ramon M. Fuscaro, MD, PhD; Topic: Common Dermatoses (Pediatric); Info: Connie Kleinsasser, USDSM - 357-1480.
- January 19 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- January 19 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- January 19 **Neuroscience Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- January 19 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- January 20 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- January 20 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- January 23 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145
- January 25 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- January 25 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Kenneth J. Ivers, Ph.D., Topic: Non-Pharmacologic Approach to Insomnia, Info: David Rossing, MD, 331-3490.
- January 25 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Dr. Edward Zawada - 339-6790.
- January 26 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- January 26 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- January 26 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- January 26 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- January 26 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- January 26 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- January 27 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145.
- January 27 **Tumor Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- January 27 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- January 30-31 **ACLS Renewal** - 7.5 hours Cat 1, McKennan Hospital, Sioux Falls; Info: Kathy Miles, 339-8096.

FEBRUARY 1995

- February 1 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- February 1 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Dana J. Windhorst, MD, Topic: An Update of Rural Occupational Medicine, Info: Larry Finney, MD, 331-3490.
- February 2 **Biomedical Ethics** - East Auditorium, Rapid City Regional Hospital, Info: Medical Staff Office - 341-8705.
- February 2 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- February 2 **Clinical Pathology Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: to be announced, Topic: to be announced, Info: Dr's J. Ruggles & R. Thompson, 665-9002.
- February 2 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- February 2 **West River Internal Medicine Grand Rounds** - 2:00 pm, Hot Springs VA Hospital, Speaker: to be announced, Topic: to be announced, Info: Dr. Donald Humphreys - 339-6790 (Pam Langhoff).
- February 2 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- February 2 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.

- February 3 **Morbidity/Mortality Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- February 3 **West River Internal Medicine Grand Rounds** - 11:00 am, Fort Meade VA Hospital, Speaker: to be announced, Topic: to be announced, Info: Dr. Donald Humphreys - 339-6790 (Pam Langhoff).
- February 3 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- February 3 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- February 7 **CPR Certification/Recertification** - 7-10:00 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- February 8 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Robert D. Behrend, MD, Topic: Recommendations for Routine Adult Health Screening, Info: Larry Finney, MD, 331-3490.
- February 8 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: Edward Dominguez, MD, Topic: Case Studies on Managing Infectious Disease Emergencies, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- February 8 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Dr. Edward Zawada - 339-6790.
- February 9 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- February 9 **Cardiac Cath Conference** - 7:30 a.m., McKennan Hospital Auditorium, Info: Cardiopulmonary Dept, 339-8171.
- February 9 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- February 9 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- February 9 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- February 9 **Internal Medicine, Tumor Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: To be announced, Topic: To be announced, Info: Dr. J. Ruggles & Dr. R. Thompson, 665-9002.
- February 9 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- February 10 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- February 10 **Pathology Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- February 13 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145
- February 14 **Breast Cancer Conference** - 12:00 noon, Meeting Room B, Sioux Valley Hospital, Info: Dr. Thomas Cink - 333-5244.
- February 15 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Wendell W. Hoffman, MD, Topic: Emerging Infectious Diseases, Info: Larry Finney, MD, 331-3490.
- February 15 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Clinical Pathology Conference, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- February 15 **Topics in Clinical Medicine - Audio Teleconference Series**; - 12:15 & 1:30 pm CT/CDT, 11:15 am & 12:30 pm MT/MDT; Speaker: Charles O'Brien, MD; Topic: Chest Pain Evaluation; Info: Connie Kleinsasser, USDSM - 357-1480.
- February 15 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: to be announced, Topic: to be announced, Info: David Rossing, MD, 331-3490.
- February 15 **Geriatric Forum** - 7:00 am, RDT Network Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- February 16 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- February 16 **Neuroscience Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- February 16 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- February 16 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- February 17 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- February 17 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- February 21 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- February 22 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: William J. Wengs, MD, Topic: How to Build a Better Headache, Info: Larry Finney, MD, 331-3490.
- February 22 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- February 22 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Dr. Edward Zawada - 339-6790.
- February 23 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- February 23 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- February 23 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- February 23 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- February 23 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- February 24 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.

- February 24 **Tumor Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- February 24 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145.
- February 27 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145

MISCELLANEOUS

FEBRUARY 1995

- February 9-12 **50th Annual Postgraduate OB/GYN Assembly**, Beverly Hilton Hotel, Beverly Hills, CA. Up to 22 hrs AMA Category 1 credit. Contact: Dir of Med Educ, OB/GYN Assembly of Southern California, 5820 Wilshire Blvd, #500. Los Angeles, CA 90036. Phone: (213) 937-5514.
- February 10 **Burn Care Today: Accurate Assessment and Appropriate Management**, Holiday Inn East, St. Paul, MN. Fee: \$140. 7 hrs AAFP & AMA Category 1 credit. Contact: Registrar, CME, St. Paul-Ramsey Med Ctr, 640 Jackson St, St. Paul, MN 55101. Phone: (612) 221-3992.
- February 23-25 **Advances in Clinical Child Neurology**, Holiday Inn of the Northern Black Hills, Spearfish, SD. Contact: K. Alan Kelts, MD, Ph.D, Black Hills Neurology, 2929 Fifth St, Suite 240, Rapid City, SD 57701. Phone: (605) 341-3770.

MARCH 1995

- March 2 **Recommendations and Management of Risk Factors for Cardiovascular Disease** and Diabetes, Marriott Hotel, Omaha, NE. Fee: \$25. Contact: Marilyn A. Peterson, Ctr for Cont Educ, U of Neb Med Ctr, 600 S 42nd St, Omaha, NE 68198-5651. Phone: (800) 642-1095.
- March 5-10 **15th Annual Keystone ENT Conference**, Keystone Resort, Keystone, CO. Fee: \$450. Contact: Marilyn Peterson, Ctr for Cont Educ, U of Neb Med Ctr, 600 S 42nd St, Omaha, NE 68198-5651. Phone: (800) 642-1095.
- March 24 **The Primary Care of HIV 1995**, Holiday Inn Internatl Airport, Bloomington, MN. 7 hrs AMA Category 1 credit. Contact: Off of Med Educ and Research at Allina, HCMC/HFA, 701 Park Ave, Mail Code 869A, Minneapolis, MN 55415. (612) 574-7982.

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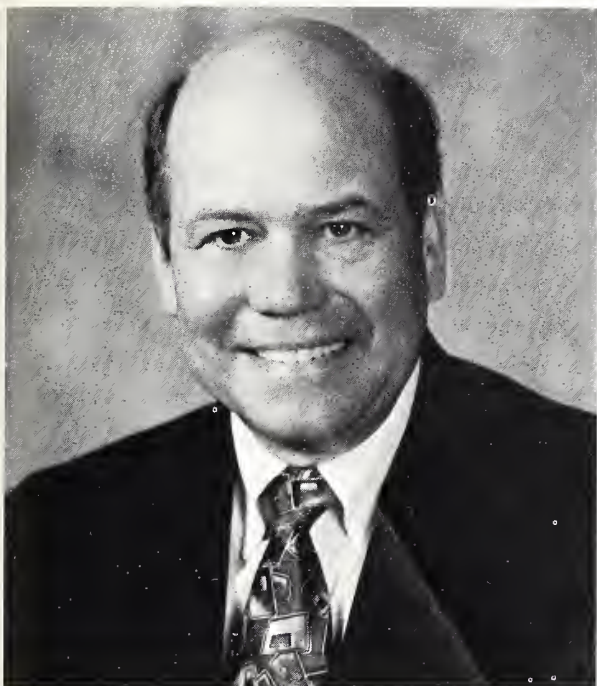
Black Hills Neurology Advances in Clinical Child Neurology

23-25 February 1995

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Guest Speakers: Paul G. Moe, MD, William M. Deering, MD, Richard Ferber, MD, Lawrence Wellman, MD, Russell Snyder, MD



**James R. Reynolds, MD, President
South Dakota State Medical Association**

As discussion on spiraling health costs continue, defensive medicine is one of the frequently mentioned reasons. Defensive medicine, defined as ordering marginal or unnecessary tests solely to protect against a malpractice suit, is a nebulous concept to measure and address. Up to 8% of diagnostic procedures have been attributed to defensive medicine. AMA statisticians estimate that \$15.1 billion was spent on physician ordered defensive medicine in 1989. This is in addition to the \$5.6 billion spent on physician professional liability insurance premiums. The amount of defensive medicine practice varies widely between physicians and between medical specialties.

Since a pilot program of Medicare looked at practice guidelines in North and South Dakota, in the mid 1980s, there has been continued interest in the concept of practice parameters. Many parameters have been written by a variety of medical groups and medical sub-specialties and, as yet, have not enjoyed widespread acceptance in part due to the complexity that results from multiple medical conditions.

In 1993, the South Dakota legislature considered, and subsequently, defeated a bill that would establish

practice guidelines for several specialty groups including anesthesia, obstetrics and gynecology and emergency room medicine. The bill also included a provision for immunity from malpractice litigation if the practice guidelines were followed. Again, this bill failed because of the complexity of establishing practice parameters for these large specialties.

It seems, as the physicians of the South Dakota State Medical Association, we have the opportunity to identify within our South Dakota practice those disease states that account for a large portion of unnecessary defensive medical expenditures. When identified, practice parameters that are accepted by both the medical and legal professions could be written that would allow physicians to practice within those guidelines. Although a malpractice suit could be initiated, by definition, appropriate care would have been provided if the guidelines were followed, and therefore, a plaintiff would have to demonstrate that a deviation from the standard medical care had occurred.

I feel the key to success of such a system would be to define a LIMITED number of medical conditions which would allow appropriate practice parameters to be written and allow for immunity from prosecution if followed.

In my opinion, this would allow for safe, appropriate care to be delivered at significant cost savings to society without fear of malpractice exposure for doing what was "right rather than doing everything". I would welcome your suggestions on this concept and any medical practice situations that you face that would allow for inclusion in such a program.

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On Families and Dementia

Inevitably, as the population in our country ages, chronic dementia is becoming an increasing concern for families and health care providers. As a neurologist, I regularly deal with the problem in a clinical fashion. There have been many times when I have had to tell patients and families that the diagnosis of a progressive dementia (generally Alzheimer's type) seemed most likely. I have regularly counseled with distraught spouses as they struggled with the issue of when home care had become too burdensome and some form of institutionalization seemed necessary. I have watched families anguish as their loved one became agitated or combative, or interrupted a slow cognitive decline with a precipitous and permanent additional loss of function. Not surprisingly, it has been my experience that the closer my relationship to a patient or family dealing with dementia, the more grim and terrifying the ravages of the disease appear.

Poetry can be a particularly effective way to characterize the experiences of the caregiver, patient, and family. The brilliant poet and physician, William Carlos Williams, was repeatedly urged to leave the practice of medicine and devote his time entirely to writing. He emphatically declined that option, noting that the wellspring of inspiration for writing was in his clinical practice. In my more humble and obscure experience, medicine has similarly served as an inspiration for poetry. Indeed, sometimes I have found myself beginning to write a piece about some general aspect of life, only to ultimately focus the work on an aspect of illness care. It is almost as if, to paraphrase Robert Frost, truth breaks in with all her matter-of-fact and insists that I return to the heart of the matter.¹

After caring for the father of a good friend and watching his severe downward spiral over the course of several years, I, at one point, wrote a poem from the standpoint of (what I now perceive to be) a detached observer. I placed this afflicted individual in the context of the play of life, noting:

*From across the room
you look mostly the same,
as if prepared for the next
rehearsal. But your eyes
miss the cues, attending
simply inward now to
who you used to be.²*

Within six months of writing this initial piece, my own father developed a rapidly progressive dementia. As with any illness, I suppose, the tensions and tragedies

are exponentially heightened if one's self or one's family is involved. As I now reflect upon a second poem about dementia, written during his illness, I am struck by the contrast with my earlier piece. With the second poem, instead of the implied detachment of a play-goer, I used the metaphor of personal battle and warfare to characterize the ravages of intellectual decline. I was struck not only by the notion of the patient's raging against disease, but also by the struggles that can frequently develop for children and spouse as an effort is made to make satisfactory compromises with impaired competence. This second poem is as follows:

Generations

*In this time of imperfect solutions to
your faltering judgement, and fierce
desire to maintain independence,
we are all pawns timidly arranged
in battle formation. Often you
speak emotions, rather than coherent
thought, as you rail against your
children's collusions which have
labeled you as infirm. You angrily
reject repeated explanations as
never been heard, then turn back
to your conflicts with daily chores,
trusting perhaps that in familiarity
you'll win back your former self.*

Certainly, in my father's case, my siblings and I were stunned at how difficult it was to see an intelligent and fiercely independent parent begin to be sufficiently erratic in his behavior that he could no longer live alone. A major difficulty that we experienced, and many of my patients' families have noted, is that there can be great fluctuations in cognitive functioning. Often my father would appear lucid, reasonable, and fairly competent. At other times, he was clearly unable to make financial and even basic personal decisions. It was extremely difficult to try to convince him, during his more rational periods, that major changes in his life needed to be made. As with many families, we proceeded through such unhappy stages as curtailing driving; arranging for a more supervised but still private apartment; and then, finally choosing a nursing home. This latter step was, predictably, a most difficult one for all concerned. Again, as a clinician, I can think of innumerable examples of spouses and families who have struggled and grieved at the prospect of such placement. It is almost never easy, and is frequently fraught with tremendous

feelings of ambivalence and guilt. I was particularly struck by the pathos of such circumstances when my two siblings and I toured a number of nursing home facilities, trying to make the best choice from a series of imperfect options.

I share these reflections mainly as a portrait of "the way things are" in clinical and private life. There are often no perfect remedies for the myriad of ethical and clinical issues in medicine. My personal and professional experience with dementia reinforces for me the notion that in medicine we need to speak the language of compromise and imperfect solutions to the unwieldy burdens which confront us. As always, it seems, there are lessons here to be internalized and taught.

Jerome W. Freeman, MD
Editor

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Molecular Medicine: A Primer For Clinicians — Part VIII: Forensic DNA Testing

Department of Biochemistry and Molecular Biology. Edited by Ronald Lindahl, Ph.D and Virginia P. Johnson, MD

ABSTRACT

Forensic DNA analysis or "DNA fingerprinting" represents a specific application of DNA testing methods. Previously, we have discussed DNA testing to determine carrier status or to provide confirmatory or presymptomatic diagnosis. Forensic DNA testing seeks to determine the identity of an individual to the exclusion of all others. The most common application of forensic DNA testing is in criminalistics and establishing parentage. In this paper we discuss the application of molecular biology methods to the analysis of DNA for forensic purposes. We also consider some of the controversial issues that surround such uses of DNA testing.

INTRODUCTION

In the previous two papers in this series we discussed various aspects of DNA-based genetic testing.^{1,2} The general methods of DNA testing were described and several of the ethical issues related to family-centered testing and population screening were presented. One form of DNA testing not described earlier is forensic DNA testing or "DNA fingerprinting". Although in many ways forensic DNA testing is identical to other forms of genetic testing, the results obtained, their interpretation and the application of DNA testing to legal issues are sufficiently different to merit separate discussion. Moreover, even though most physicians may not use this type of testing in the daily practice of medicine, there are situations where it is the test of choice. Finally, a discussion of DNA fingerprinting may be useful background in what is certain to be renewed public interest in DNA-based testing during the next several months as a result of publicity surrounding its application in several high profile legal proceedings.

The application of genetic testing to forensic situations is not new. The use of blood group typing, protein isozyme patterns and tissue antigen typing (HLA typing) for individual identification has been accepted in legal cases for years. These analyses are based on the detection of the products of genes, similar to tests for PKU and Tay-Sach's disease. The unprecedented ability to directly examine the genetic material makes genetic testing so potentially powerful in forensics. It

is the ability to directly compare the DNA from victims, suspects and crime scenes at the base-pair level that is the basis for the power of DNA fingerprinting. This power has also been the source of much of the controversy that can accompany forensic DNA testing in certain situations.

WHAT IS FORENSIC DNA TESTING?

As we discussed previously, genetic testing is based on the direct detection of different alleles of the gene of interest.^{1,2} For family-centered and population screening tests, the purpose is to determine whether individuals tested possess the normal or mutant alleles for the gene(s) of interest. This is used to determine carrier status or to provide confirmatory or presymptomatic diagnosis. For these analyses usually only one gene, or a small number of genes directly associated with the condition, are examined.

Forensic DNA testing seeks individual identification to the exclusion of all others. Since the goal is positive identification, two or more different DNA samples must be compared; either victim and potential suspect(s), victim and/or suspect and crime scene, or child and potential parents. Because the goal is identification, advantage is taken of the high degree of DNA variability (genetic polymorphism) each of us possesses. The blood group antigens are a typical example of a genetic polymorphism. Although an individual can possess only 2 alleles for ABO or Rh blood type, several different alleles at the genes that determine these blood

types exist in any population. If more than one polymorphic gene is examined, a profile of the alleles an individual possesses can be generated. If enough genes are cataloged, an allele constellation (genotype) unique to each individual can be produced. However, most protein-coding genes are not highly variable. Most genes have one common and usually two or three rarer alleles. Therefore, depending on the degree of polymorphism at each gene, several, perhaps a dozen, genes would have to be examined to even approach a unique profile. While technically possible, the direct assessment of genotype at more than a few such genes, even by RFLP analysis using PCR,³ is currently too time consuming, labor-intensive and costly to achieve widespread use.

Certain regions of the human genome are highly polymorphic. These very polymorphic regions are usually anonymous, not part of protein-coding genes. The "non-gene" DNA sequences have accumulated mutations through the ages without deleterious effects and have become highly polymorphic. Most often, these regions contain short stretches of DNA sequences (10's to 100's of base pairs) that are repeated one after the other many times (10's to 1000's of times) at specific sites on the chromosomes. One such type of DNA sequence is called a Variable Number of Tandem Repeats (VNTR) region. There are hundreds of VNTRs scattered throughout the genome. Each VNTR can be variable in both the length of its repeated sequence as well as the number of times the sequence is repeated. Moreover, each VNTR has its own unique sequence. Thus, VNTRs are very highly polymorphic. Many different alleles, often 30 or more, have been identified for most VNTRs. The large number of different alleles at each VNTR locus also means that each allele is relatively rare in a population, with frequencies usually less than 1% to 5% (0.01-0.05); such that even if only a small number of VNTRs is examined, perhaps 4-5, the probability of any two individuals having exactly the same alleles at each VNTR tested will be extremely low. Thus, the advantage of using VNTR probes to create molecular fingerprints.

Forensic DNA testing employs the same methods as any other DNA-based test.¹ These include isolation of the DNA from some source, usually, but not always, PCR amplification of the DNA regions of interest, followed by electrophoretic separation of the DNA molecules and their identification with specific probes. If RFLP analysis is part of the protocol, the DNA must be digested with the appropriate restriction enzymes prior to electrophoresis. As with other genetic testing protocols, access to suitably specific probes is very crucial to successful DNA fingerprinting. Recall that the objective of forensic DNA testing is to determine the genotype of an individual at several highly variable sites in the genome. Therefore, rather than examining one gene for the presence or absence of a particular

allele, the goal is to establish the exact allele composition (fingerprint) of several different "genes". The DNA fingerprint is analogous to a bar code. Recall also that in forensic testing one is always comparing two or more DNA samples for molecular differences or similarities. One can use PCR/RFLP analysis to examine several highly polymorphic protein-coding genes or DNA sequences individually, as single locus tests, and the combined results become the DNA fingerprint. Alternatively, one can combine probes to examine several highly variable regions simultaneously, such as VNTRs, in a multi-locus test. As discussed below, both single locus and multi-locus tests have important uses in forensics.

ADVANTAGES OF FORENSIC DNA TESTING

The advantages of DNA-based forensic testing are similar to those discussed previously for any DNA-based testing system.^{1,2} These include the fact that one is directly examining the genetic material itself, rather than the protein product. This is particularly important as it relates to sample age and integrity. Serology-based forensic tests that rely on detection of gene products are often limited in the time frame (days to weeks) over which samples can be tested because many of the protein-containing molecules detected are subject to denaturation or degradation over time. Proteins, carbohydrates and lipids are particularly sensitive to acids, bases and detergents; DNA is not. Additionally, DNA-based forensic testing can be done on samples contaminated with other biological materials. For example, female can be distinguished from male DNA, different male contributions from each other and human from non-human DNA. Finally, virtually any biological material can be a source of DNA for testing. A single hair root or blood cell can be used, as well as any biological fluid, including saliva, semen and urine. Moreover, these sources do not have to be viable or functional. DNA can be extracted from the dried saliva on the back of a postage stamp or from dried semen or urine samples. These same materials are of limited or no use in serologic forensic testing.

The greatest advantages of DNA-based testing to forensics are its sensitivity and discriminatory ability. The ability of a DNA-based test using PCR to amplify a specific DNA sequence of interest from a single cell means that even the smallest amount of biological material can provide useful DNA information. Since the availability of adequate samples is often a limiting factor in the sensitivity of serologic analysis, DNA-based testing overcomes this limitation.

The real power of forensic DNA-based testing is its ability to discriminate between individuals because DNA testing is based on genotyping rather than phenotyping.⁴ Certainly traditional, friction ridge fingerprinting can provide individual positive identification. However, the likelihood of finding usable

fingerprints at a crime scene is highly variable. ABO blood typing can distinguish between approximately one in three individuals. Adding additional blood group markers raises the discriminatory power to one individual in a few thousand. Including HLA typing can increase this further to identifying one individual in several million, however, with all the caveats noted above about sample integrity in serologic testing.

DNA testing has the ability to provide virtual positive identification of each and every individual that is not possible with any other forensic testing method. If the entire 3 billion base pair human genome could be directly sequenced for each individual this would show that each of us has a unique DNA sequence. The potential of complete DNA sequencing for individual identification purposes is neither technically feasible nor ethically desirable.² However, by selecting a small number of highly polymorphic DNA sequences such as VNTRs, it is possible to establish the probability that any set of "DNA fingerprints" represents either a chance association versus confirmation that the two DNA samples being compared are from the same source.

APPLICATIONS OF DNA TESTING IN FORENSICS

DNA testing in forensics can be either exclusionary or inclusionary. An individual can be excluded as a suspect or victim with absolute certainty on the basis of one allele mismatch in a DNA test battery. Of course, ABO or Rh incompatibility can also be exclusionary. The power of DNA testing for exclusion is that it provides exclusion when other serologic tests are not available or provide contrary results. There are now several cases of individuals having been convicted on the basis of non-DNA-based forensic evidence, who have subsequently had their convictions overturned following exclusionary DNA testing.

Positive identification by DNA testing, or inclusion, is based on the unlikely probability that the concordance of test results at all loci examined in the tested samples is due to chance alone. Thus, inclusion by definition cannot be absolute. Unless each of the 3 billion base-pairs in both samples is sequenced, there will be some probability, however small, that the next locus tested would reveal a mismatch. Again, the power of DNA-based testing is that the odds of the results being due to chance alone can be such a small number (e.g., 1 in 1 billion or more), that the identity of two samples is a virtual certainty.

The applications of DNA testing in forensics are limited only by sample availability. The most common uses are in determining paternity and in linking suspects to crimes or eliminating potential suspects. However, DNA based testing is also used to establish identity of victim remains, especially in accidents with multiple victims; identify serial and copycat crimes, and

missing persons. Other applications of DNA testing include establishing the origin or possession of threatened or endangered animal or plant species involved in poaching or black market sales.⁴

The earliest regularly accepted legal use of forensic DNA testing was in establishing paternity in cases of disputed parentage.⁵ Establishing paternity is necessary to obtain child support, to settle contested wills and estates and to determine if baby swapping has occurred.⁵ Here the use of either multilocus or a battery of single locus tests can establish parentage with certainty in virtually every case. Examining just three typical VNTR loci or other highly variable regions (each with individual allele frequencies of 1% in the population) can determine paternity with 99.9999% certainty.

Jeffreys and colleagues first coined the term "DNA fingerprinting" in 1985.⁶ Within a year they had employed the technique in England in two legal cases, a murder and an immigration case.⁷ The first criminal conviction using DNA testing in a United States court was in the case of the State of Florida vs Andrews in 1987.⁸ Tommy Lee Andrews was convicted of rape after semen samples obtained from the victim matched the DNA pattern obtained from his blood sample. In the five years following the Andrews case, DNA testing was used in more than 10,000 criminal and civil investigations and admitted into evidence in over 750 cases.⁴ In less than 15 cases were DNA test results rejected by a court.

LIMITATIONS OF AND ISSUES SURROUNDING DNA FINGERPRINTING

As the electronic and print media have recently documented, the use of DNA fingerprinting is not without controversy. Much of the debate relates to issues of DNA-based testing reliability and interpretation of the results with respect to inclusion probabilities. Other concerns involve privacy issues, the establishment of offender DNA test databases and the use of DNA test results obtained for non-legal purposes in subsequent forensic situations. While all of these issues have been discussed in relation to DNA-based family-centered testing and population screening,^{1,2} each has unique aspects when applied to forensic DNA testing.

Like any other DNA-based test, the reliability of DNA fingerprinting is of paramount concern for all concerned. Reliability must be established both generally and in specific cases for DNA testing to be accepted legally. In the strict sense, reliability refers to the ability of a trained individual to prepare samples and conduct the actual test procedures with repeatable accuracy. Since any DNA test is technically complex, minimizing technical mistakes that render results uninterpretable is important. This issue has been addressed repeatedly during the period when DNA

testing was considered equivocal by the legal system. It is now almost universally accepted among all parties, investigators, prosecuting and defense attorneys, and the courts that DNA fingerprinting can be reliably done by trained individuals working in an academic or commercial facility devoted to such testing. The key requirements are the inclusion of control DNA samples and test result repeatability. Controls are needed to establish sample integrity and to serve as knowns in the interpretation of results. Test repeatability refers to obtaining identical results in at least duplicate trials. Quality control assurance and proficiency guidelines have been proposed and accepted by a variety of groups and associations involved in DNA testing in general, including DNA fingerprinting.⁴ Of course, the issues of sample integrity and identification and documentation of the chain of evidence are separate issues that are relevant to any type of forensic analysis.

Even if the admissibility of DNA testing is not often an issue because of its reliability, the interpretation of the results can be problematic. While result interpretation can occasionally be undermined by a poorly conducted test or severely degraded samples, tests are more often subject to interpretation with respect to what a positive result means. A negative test, i.e. a mismatch between evidence and suspect samples, is exclusionary and never in contention. However, a positive test battery result only defines the probability that any match is not due to chance alone. Proving that the match is not due to chance relies on comparison of the samples in question not only to each other (samples from the crime scene and suspect) but also to the probability that there is another individual in the population who could have the same exact allele constellation as the suspect or putative father.

It is the selection of the appropriate reference population on which to base the latter comparison that has most often been challenged.^{9,10} The debate focuses on human population genetics and whether the allele frequencies (of VNTRs and other loci used) vary significantly between different nationalities and ethnic groups or between different local populations across the United States. It has been argued by some well respected human geneticists that significant differences in allele frequencies do exist among different ethnic groups in the United States or in different regions of the US and that these differences can have an effect on the probabilities on which positive identifications are based.⁹ Also an issue is that every allele cannot always be identified with certainty because for some loci, allele designations are arbitrarily made based on the size of DNA fragments produced. Even though one discrete band conforms to a certain molecular size marker on the gel, critics argue that this does not mean that all the DNA fragments at this location are of the same DNA sequence, only that they are of the same size.⁹

Other equally well regarded geneticists argue that even if there are differences in allele frequency between different subpopulations, these differences are small, and that since the alleles are rare, even a 2-fold difference in frequency between 2 populations would have minimal impact on the probability of inclusion.¹⁰ For example, if 4 VNTR loci were screened and each allele at each locus occurred with a frequency of 1% (0.01) in a population, the odds of a chance match between any 2 random samples showing the same genotype would be 1 in 10 million ($.01 \times .01 \times .01 \times .01$). Even if the frequencies of the alleles of interest at 2 of the VNTR loci were 2% in another population, the odds drop to 1 in 2.5 million ($.01 \times .01 \times .02 \times .02$). Is this 4-fold decrease in probability of a match being due to chance significant at this level of probability?

This debate among human geneticists resulted in forensic DNA testing being subjected to the "Frye Test" in court proceedings early in its forensic use.¹¹ The Frye test is applied by courts to judge the acceptability as evidence of a scientific test. To be acceptable, the scientific basis of the test in question must have gained general acceptance in the field in which it belongs.¹² DNA fingerprinting has repeatedly withstood application of the Frye test to the extent that the scientific basis of DNA-based testing in forensics is generally accepted today. However, since the debate regarding use of the appropriate population for comparison, it is now standard procedure to base probabilities on an ethnically similar (to suspect) reference population. Using the appropriate reference population and the standardization of methodology between laboratories has virtually eliminated the argument regarding allele discrimination based on size. Thus, future debate about the "reliability" of DNA fingerprinting will not focus on the acceptability of the scientific basis of the techniques or the testing protocols per se, but on the integrity of both the samples and the chain of evidence.

The remaining issues regarding DNA-based forensic testing relate largely to individual rights. The first issue is the invasiveness of DNA-based testing and raises questions related to unreasonable search and seizure and probable cause. Obtaining DNA for testing involves taking a blood sample or some other tissue from the subject, often without the subject's consent. Certainly taking a blood sample is more invasive than the fingerprinting or photographing of a subject. Should police have to establish probable cause and obtain a search warrant before obtaining blood or tissue for DNA testing? To date, most courts have maintained that a search warrant and probable cause are necessary unless there is reasonable suspicion that the subject has been involved in a crime. Moreover, since blood testing has been so useful in forensic situations, it is not likely that DNA testing will be controversial to the public, as long as the testing is limited to suspects or offenders.

One outcome of DNA fingerprinting is the establishment of DNA databases, much like fingerprint databases, for the rapid comparison of samples. Many states, including South Dakota, and the federal government have enacted or are considering legislation creating such offender databases. Should convicted criminals be required to submit a sample for DNA testing to become part of a DNA database? The Supreme Court has ruled on several occasions that the use of administrative searches, where information is obtained not based on individual suspicion, but on serving more compelling public interests, do not violate the constitution. Therefore collecting samples from those convicted of certain crimes for database inclusion is legal. What about those individuals tested as suspects but subsequently excluded? Should their data be entered because they were a suspect? For what crimes should data be collected—for crimes of violence against another person or for certain property crimes as well? What about certain types of white-collar crime? DNA testing has been used successfully in at least one case of mail fraud. If a match between a suspect in a particular case and a database entry occurs, how is this information to be used? As probable cause for obtaining further samples for testing or directly as evidence?

Should information collected for establishing forensic DNA databases be used for other purposes as well? If such testing for forensic purposes were to yield medically relevant information regarding a certain genetic disease, should this information be dealt with as any other DNA testing information as we have discussed previously?² What is the risk of genetic discrimination arising from a forensic DNA database? What about the converse? Can non-forensic DNA testing information be used for forensic purposes? Traditional fingerprints collected as part of employment or for other non-offender purposes can be used in forensic situations. The analogy of DNA fingerprints to traditional fingerprints has been used to establish the use of DNA testing as just another tool in law enforcement, can not the same argument be used for other non-forensic DNA test results? While these issues may not be of much concern today because all forms of DNA testing are in their infancy, as DNA testing becomes more widespread, a readily available partial DNA fingerprint at several loci may have a number of forensic as well as non-forensic applications.

SUMMARY

It is appropriate to point out that the arguments and controversies surrounding DNA fingerprinting were also raised when traditional fingerprinting, blood typing and protein isozyme patterns were first introduced as forensic tools. As the reliability of these tests were proven, their use became the standard in the field. Forensic DNA testing is undergoing a similar evolution. The power of DNA-based testing to provide definitive

answers not possible by any other method is invaluable. Case law will ultimately prove that DNA fingerprinting is based on sound scientific and legal principles. As with all other forms of DNA testing, the ultimate acceptance of DNA fingerprinting will lie with the judges and juries that decide cases in which DNA evidence is presented. This, in turn, is ultimately dependent on a well-informed society.

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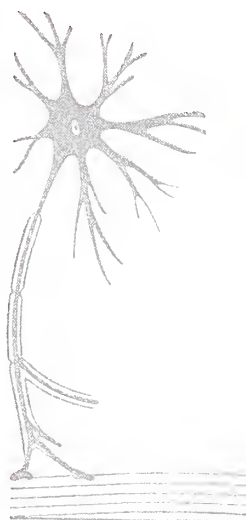
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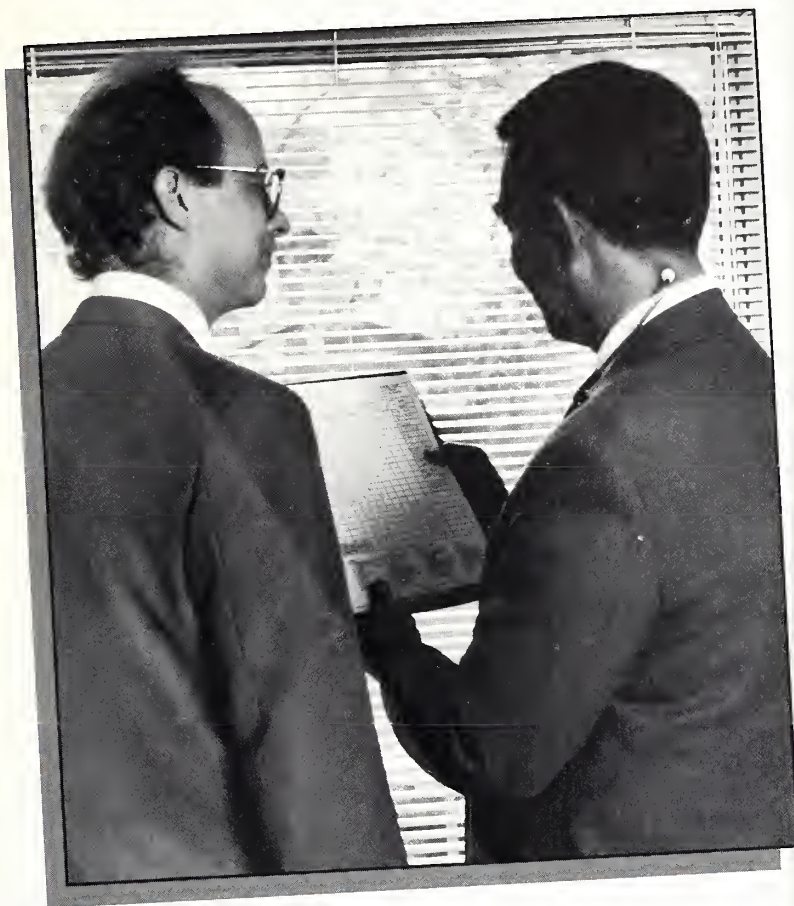
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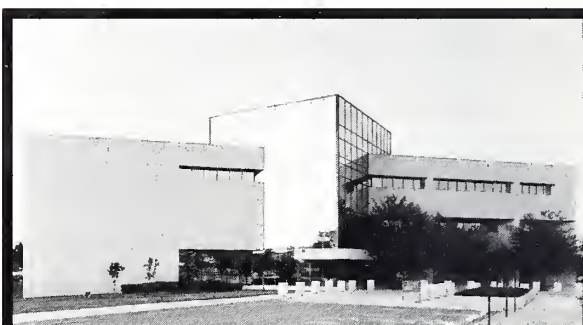
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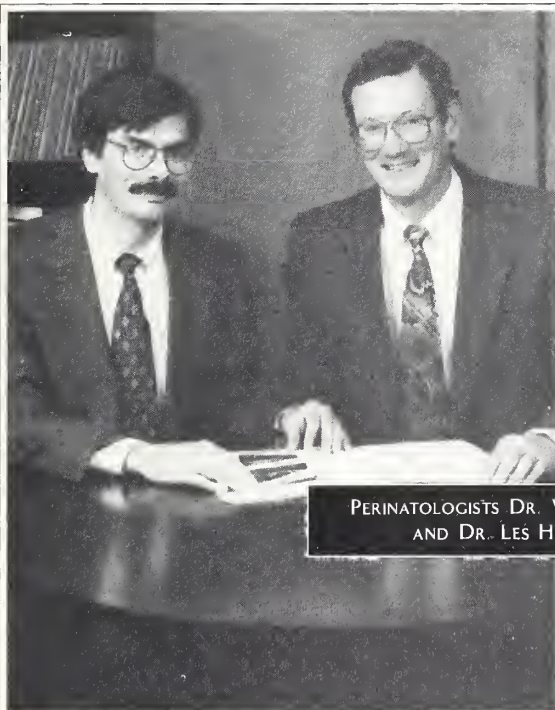
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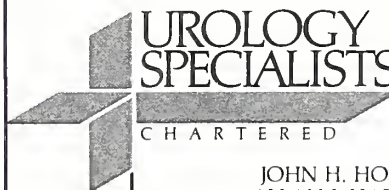
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Medication Errors: Frequent... Costly... Preventable

MMIC Risk Management Committee

Prescription of medication. It's one of the most common procedures performed in physicians' offices. A new study reveals that it is also one of the most frequent and most expensive procedures named in malpractice claims.

The Physician Insurers Association of America (PIAA) analyzed 393 claims involving medication errors to identify factors contributing to the errors and means of preventing them. Each claim resulted in an indemnity payment of at least \$5,000; the total indemnity paid on the claims exceeded \$4.7 million.

"Many physicians don't realize that medication errors—often just careless errors—are causing serious patient injuries and huge malpractice losses," says Elizabeth Lincoln, Vice President of Risk Management and a member of the national committee of physicians and risk managers that conducted the study. "But, the encouraging news is that the study makes it clear that many of the losses could be prevented."

Significant findings of the study included:

Severity of claims

Over 21% of the claims reviewed involved the death of the patient; the medication errors were the cause or a significant contributing factor in the death in 84.3% of those cases. Another 21% of the claims involved serious permanent injury, including quadriplegia or brain damage.

The overall average indemnity paid on claims involving the prescription of medication was \$120,722 (compared to \$121,431 for all types of malpractice claims). The potential for particularly serious consequences of medication errors in young patients is reflected in the fact that the average indemnity for patients in the 6-17 year old age group exceeded \$400,000 per claim.

Medication errors

Many of the claims involved more than one medication error. The most frequent errors found were:

1. Incorrect or inappropriate dosage.
2. Medication inappropriate for the medical condition.
3. Failure to monitor for drug side effects.
4. Communication failure between physician and patient.

These four errors accounted for 37.4% of the total errors identified.

According to Ms Lincoln, "The claims involving communication problems are often based on the failure of the physician to obtain the patient's informed consent or to adequately instruct the patient about how to take the medication. Good patient education and brief documentation of the informed consent discussion could go a long way toward eliminating these cases."

Other errors pointed out the need for improved monitoring and recordkeeping systems. These included:

- Failure to monitor drug usage or length of treatment.
- Inadequate medical history.
- Inadequate charting.
- Failure to read the medical record.

Medical specialties

Although the medication error claims occurred in a wide range of specialties, internists and family physicians were the most frequently named, accounting for 59.3% of all claims and 45.8% of all indemnity paid. "This was not a surprising finding," says Ms Lincoln. "Physicians in primary care tend to prescribe more often and use a wider variety of drugs than specialists. The medication errors we found had less to do with the specialty than with the type of drug prescribed, the knowledge level of the individual physician and the precautions used in prescribing."

Medication classes

The most frequent drug classes involved the claims were antibiotics, glucocorticoids and narcotics. Together, these three classes accounted for 34.9% of the total claims and 36.4% of the total indemnity paid.

The most common medication errors for each of these classes were:

Antibiotics: failure to note a previously documented allergy; most appropriate drug for the medical condition not used; and drug inappropriate for the medical condition.

Glucocorticoids: incorrect dosage; communication failure between physician and patient; and failure to monitor for drug side effects.

Narcotics: drug inappropriate for the medical condition; incorrect dosage; and failure to monitor drug side effects.

This article was adapted from "Medication Errors: Study Identifies Causes and Prevention," *Minnesota Physician*, November 1993.

The study also provides detailed information about the specific drugs within each class that cause the greatest malpractice problems for each specialty.

Complications/injuries

Central nervous system (CNS) damage—identified in 21% of the claims—was the most frequent complication or injury resulting from the medication errors studied. The drug classes most frequently causing CNS damage were narcotics and minor tranquilizers. The errors most frequently associated with these drug classes were incorrect dosage and failure to monitor either drug usage, drug effects or drug side effects.

Allergic reactions occurred in 14% of the claims, most commonly with antibiotics, non-steroidal anti-inflammatories, anti-convulsants and diuretics. These cases are of particular concern to Ms Lincoln. "Allergies that are previously unknown don't cause malpractice problems. But we found in the study that the allergic reactions should not have been a surprise—common errors in the paid claims were failure to note a previously documented allergy, failure to read the medical record and inadequate medical history. These mistakes are often the result of poor recordkeeping systems."

"The most disturbing thing about the study was learning how many of these very serious injuries and malpractice claims could have been avoided," says Ms Lincoln. "The claims didn't involve complicated treatment regimens or unknown risks. They involved commonly used medications and were caused by simple problems like failure to learn about the drugs the physicians were prescribing, failure to follow routine monitoring protocols and, most disturbing, failure to read the medical record."

"Physicians often 'tune out' when risk managers start talking about such basic factors, but the PIAA study proves that these basic problems are causing significant injuries and huge claims and payouts."

The study offers several suggestions for loss prevention steps that can help improve patient safety and minimize medication-related malpractice claims and losses. (See below) "The risk management advice may seem simplistic, but it's obviously too often forgotten," cautions Ms Lincoln.

Medication Errors

Loss Prevention Recommendations

- Chart all prescriptions and refills on a medication flowsheet.
- Post medication allergies on the chart in a consistent and conspicuous manner.
- Obtain and document medication histories from patients and update them as necessary.
- Read the medical record for contraindications to medications, excessive numbers of refills and allergies.

- Before prescribing unfamiliar medications, review authoritative references for the correct dosage, contraindications and side effects.
- Educate patients about their medications.
- Obtain and document informed consent for the prescription of medications with potentially significant drug complications and side effects.
- Closely monitor for drug side effects.
- Closely monitor drug usage, particularly with controlled substances.
- Periodically re-evaluate patients on chronic analgesic or psychotropic therapy for the indications for, and efficacy of, continued therapy.
- Obtain specific drug allergy information for antibiotics, non-steroidal anti-inflammatories, anti-convulsants and diuretics.

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Preparing Faculty Members for Problem Based, Small Group Learning Encounters

Howard T. Gilmore, MD

ABSTRACT

In 1991, the University of South Dakota School of Medicine initiated the use of a problem based educational method for the junior students at the Yankton Campus. This program was innovative for both the students and the faculty. In order to prepare the faculty for their role in the management of the small group sessions, workshops were arranged. The students that made up the groups were chosen from the senior class at Yankton High School. Since these students needed appropriate prompting, the faculty gained experience in the management of a problem based small group learning session.

The older I get the more I realize that there is one wealth, one security on earth and that is found in the ability of a person to perform a task well. And first and foremost, this ability must start with knowledge.

Abraham Lincoln

The past decade has seen the development of many important changes in the field of biotechnology and a vast increase in multimedia stores of information available for the medical student and the medical practitioner. Because of these changes and the improvements that are certain to follow, it has been recommended and will become increasingly important that a learning method be developed and utilized which will permit the accumulation, assimilation and utilization of new information in a timely, efficient manner. This concept is neither new nor unique. In 1932, Rappleye¹ commented on the need for changes in medical education. "These changes are in recognition of the fact that the crucial element is the individual student, upon whose character, attitude, preparation, ability and industry so largely depend the results of medical training. The aim is to develop minds capable of appraising evidence and drawing conclusions based on logical reasoning, and to help provide a permanent intellectual equipment, resourcefulness, judgement and proper habits as well as methods of study, which will prepare the student to continue his own self-education throughout his life." Ideally the student should be self-motivated and comfortable with independent learning. The learning process should be active and self directed. The emphasis of formal education should be

to assist the student with the development of the ability and desire to continue to learn while solving problems. Concerns about the process of medical education were also expressed by John Gardner, "If we indoctrinate the young person in an elaborate system of fixed beliefs, we are ensuring his early obsolescence. The alternative is to develop skills, attitudes, habits of mind and the kind of knowledge and understanding that will be the instruments of continuous change and growth on the part of the young person. Then we will have fashioned a system that provides for its own continuous renewal."²

To reorient the learning process and the teaching process, it has been recommended that medical education would benefit from a shift away from the traditional lecture and hospital practice based method of education toward a student centered, problem oriented, ambulatory practice based educational model.³⁻⁵ If such a method shift is undertaken, the faculty must readjust its role to become a more passive participant, thus permitting the student to assume an active role in his own education. This certainly does not mean that the faculty should disappear. Instead, it means that the faculty should provide appropriate direction and an equivalent opportunity to learn the basic science and the clinical information requisite to the practice of medicine. With appropriate guidance from the faculty, small groups of students thoroughly evaluate a series of problems which are chosen because of the intellectual challenges they present. The knowledge gained from this process is essential for the progress of their medical education. The students must discuss the problem

thoroughly, research any unknown areas, reflect on the problem, and review their past knowledge about the situation, then make hypotheses about possible causes and solutions of the problem. This form of thinking, known as metacognitive thinking, is felt to enhance learning and memory. Metacognitive skills are to be encouraged not only because they promote retention of information, but also because they promote thinking about problems when they occur. The avoidance of metacognitive functions implies the use of reflex action and impulsivity rather than thoughtful consideration in the face of difficult problems.

In response to this challenge to streamline and improve the process of medical education, the University of South Dakota School of Medicine developed what has become known as the Yankton Model Program. The Yankton Campus has been one of three centers in the state where the junior year clerkships are completed. The recommendation to develop a student centered, problem based program was made in 1988. After this challenge was received, a group of faculty coordinators were chosen to create and implement the program. The first class to utilize the problem based format was the 1991-1992 junior class.

There were several challenges to overcome to assure the success of this program. Among these challenges was the development of a curriculum plan that would satisfy the curriculum and education committee. This was done by using the same educational objectives that are used on the other campuses in Sioux Falls and Rapid City. At the beginning of the year, the students are thoroughly oriented to the problem based educational method. They are then tested over the same core subjects as the students at the other campuses. The performance expectations are the same for all students, all have the same minimum standards for advancement. The students are expected to study each of the core subjects at their own speed and in their own order. The students are tested five separate times during the year. They are expected to meet the same standards as the students in the traditional programs and to show progress through the year. At this time three classes of ten students each have completed the problem based program and only four have required additional time and concentrated study to meet the minimum standards.

Initially, concern was expressed by some faculty members that the students would have a hard time learning if they did not receive the traditional core of lecture based information. When the program was in its developmental stages, the question was frequently heard "How can the student be adequately educated without my lecture?" Other comments implied that a program with no formal lecture series would be doomed to training inadequately prepared students. Statements such as these are incorrect and represent a lack of familiarity with the problem based method of

education. There is ample evidence to show that metacognitive learning is an effective learning tool. One study demonstrated that students learning by the problem based method could not be separated from students learning by the traditional passive learning method if both groups were tested at the completion of their academic experience.⁶ There is, however, evidence that those who become oriented to the problem based method will have longer retention of the information and they will continue to use this learning style long after the specific course is completed. The end result is that those who employ the problem oriented learning style will have improved performance on examinations given at times separated from the end of the course. It is very likely that the learning method becomes a part of the students style of thinking and they continue to utilize the method because of the positive benefit for the student and the patient as well.

This program is not intended to eliminate the participation of the faculty. Instead it should increase the active participation of the student in the learning process under the skillful direction of the faculty. The problem oriented sessions are often managed in a cooperative manner with a basic science and a clinical faculty member moderating the sessions. The students are actively involved in the process because they choose the clinical problem that is to be discussed. The problem is presented by one of the students. The other members of the group then ask questions about the problem in order to learn enough about the clinical presentation to lead the group through a discussion of the evaluation and management of the problem. It is recognized by the students and the faculty that clinical problems, their diagnosis and their resolution are much more involved than a chief complaint, a couple of lab tests and a pill or two. Therefore, it is the responsibility of the faculty to ask appropriate questions to encourage the students to explain the anatomy, physiology, pharmacology and other technical aspects of the problem before the problem is considered to be resolved. When these questions are asked, the students and the faculty alike may face questions that they cannot immediately answer. When this occurs, a learning issue is developed. The students must then go to the library and use the literature at their disposal including standard texts, appropriate journals and complete literature searches to investigate the problem. They may also consult with peers or faculty "experts" to gain a more complete understanding of the problem. Each clinical problem presents several such learning issues so that each student has one or more issues for which he is responsible. The students must then prepare a summary of the learning issue to present at the next group meeting. By completing these investigations, the students have considered many aspects of the problem by deliberation, reflection, review and summarization. This process is a metacognitive approach to learning. This style of learning may be the most appropriate way

to approach a problem. If metacognitive thinking is not used to evaluate, research and resolve problems the approach tends to be a reflexive or impulsive response, an inherently dangerous method of dealing with clinical problems.⁷

It is not the function of the faculty to provide the content of a clinical evaluation. Instead the faculty's role is to make certain that appropriate questions are asked to facilitate the complete evaluation of the problem by the students. If this is done following the principles of metacognitive learning, the students can achieve a thorough understanding of the problem. Accomplishing this goal does not require that the facilitator be an expert in that particular field. It has been demonstrated that experts in a specific field may be less effective when facilitating a discussion in their particular field of expertise because they tend to be more directive and to dominate the discussion.⁷ Learning is more effective if there is active learning with the discourse occurring between the students rather than passive learning between the student and the teacher. Therefore, the best learning environment is to have a facilitator who is skilled at asking questions that promote discussion, reflection, evaluation and review of the problem.

The students benefit from the fact that they now have the freedom to learn by interactive discussion with their peers. They may proceed at their own speed and with their own preferred learning style. Initially there is some discomfort for the teacher and the student in making the transition from the competitive, lecture based passive learning style that they have previously experienced. Familiarity with the method diminishes the anxiety and permits the development of the student into a thoughtful, contemplative physician.

These statements should not imply that this method is limited in scope to the training of medical students. Metacognitive learning and small group interactive teaching can be an effective tool in teaching any subject and any age group. If the aim is to develop a positive learning curve, motivated students and a willing instructor can virtually guarantee positive results regardless of the age of the student or the subject matter. Sophisticated ideas can be evaluated and effectively discussed given proper presentation and motivation. When motivated teachers and students combine their efforts, the results, in terms of the total educational gain, should give positive reinforcement to the student.

The student is not the limiting factor in this educational model. Students are usually willing to participate when their goal of gaining an education is facilitated. More frequently it is the initial reluctance of the faculty that must be overcome before real progress can be made. It has been the feeling of the faculty at the Yankton Campus that the most rational method of helping the faculty adjust to this change in the learn-

ing/teaching process is to provide workshops which provide a demonstration of the method and a hands on experience managing a group session. The utility of this type of session was demonstrated during the initial orientation of the problem based method on the Yankton Campus.

In order to orient the first group of facilitators, faculty members from Rush Medical College, where the problem based method is used in the preclinical years, were invited to come to Yankton to demonstrate the method. One of their requests was to have four groups of students available to use as demonstration groups. After searching and offering the inducement of cash, only three groups of medical students could be found who were willing to spend two days of hard work performing the tasks required of them. Therefore, a group of students that had recently graduated from the Yankton High School, all of whom were known to be scholarly and motivated, was organized as one of the demonstration groups. The sessions were all video taped so they could be evaluated later. All of the groups, including the high school graduates, were oriented to the problem based method. They were given a medical problem and their discussion of the problem was facilitated by the prospective faculty participants. Those groups, which consisted of senior medical students, were able to proceed directly through the discussion of the history, physical and clinical aspects of their problem with very little prompting from the faculty. The group of high school graduates required more prompting and encouragement, but were able to discuss an asthma related problem in a sophisticated manner. By the time they completed the six hour evaluation of the problem they had progressed as thoroughly and effectively through the problem as had the medical students. This evaluation of the problem included a surprisingly detailed discussion of allergens and their involvement in the development of asthma. The signs, symptoms, pathophysiology and treatment of asthma were also discussed. In the process of managing this group of young students, the prospective facilitators gained considerable experience in the management of small group interaction.

This initial experience was a success not only with the medical students, but also with the high school students. The high school students needed more prompting to facilitate a successful case discussion. They also needed encouragement to think more deeply about solutions they had considered and possible solutions they may not have considered. The medical students needed less prompting, therefore there was less need for intervention by the facilitator. In the actual small group learning sessions, the facilitator is encouraged to avoid intervention unless it is required to promote discussion or to introduce important associated issues for consideration by the group. When intervention is required, it should be done in a manner which helps the

student think, hypothesize, investigate, evaluate the literature and finally to formulate their own conclusions. If the facilitator uses statements which block or limit discussion, or if he tries to dominate the discussion by being too intrusive, the group learning may falter rather than flourish. Since they required more frequent, appropriate prompting, the high school students made better subjects for training new facilitators.

Since the initial training and orientation program, there has been a continuing need to train new facilitators. Each year a new group of Yankton High School seniors that have expressed an interest in medicine, have been oriented to the small group learning method and then used to train prospective facilitators in the appropriate management of small group learning sessions.

The success of this method of training facilitators is difficult to measure in objective terms. It can be stated, however, that many of the facilitators who have participated in the workshops and have been exposed to the premedical students have been well appreciated by the medical students because of their ability to ask questions that promote rather than inhibit discussions. Every six weeks the medical students have the opportunity to evaluate the effectiveness of the facilitator. Those facilitators who have had the opportunity to work with bright students who only need to have their imagination stimulated and their progress subtly and occasionally redirected have consistently been considered to be the most effective group leaders. In contrast, those facilitators who have ignored the principles of effective group interaction and have dominated the groups by their directive manner of teaching have been less effective and less well received.

It is felt that these groups of bright high school students have been very helpful and beneficial in the preparation of experienced faculty for their expanded roles as facilitators in the problem based student directed training program. It is also felt that the programs have been successful because of the positive encouragement that the students have gained by exercising their innate capabilities in a field that they had only fantasized about prior to this exposure.

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Alcohol, Sleep and the Aged Patient

Jane R. Mort, Pharm.D, Brookings, SD

Sleep difficulties are a common complaint of the aged and are reported by up to 50% of this population.^{1,2} Typical sleep concerns include frequent arousals with difficulty falling asleep and early morning awakenings.^{2,3} The occurrence of these problems is not surprising given the changes in the amount of time spent in each sleep stage seen with aging. Comparison of an elderly to young population shows an increase in stage 1 sleep (light sleep) which is related to the frequent arousals,² a reduction in stage 3 and 4 (delta or deep sleep),^{1,4} and a reduction in rapid-eye-movement (REM) sleep proportional to the decrease in total sleep time.² Typically the aged person spends more time in bed but sleeps less of the time.^{1,3} Current therapeutic options for the management of sleep are limited by their effects on sleep stages, adverse outcomes, development of tolerance and withdrawal effects.^{2,4} In spite of this, insomnia should be evaluated by a health care provider in order to identify underlying treatable causes such as depression and to address the patient's sleep hygiene.²⁻⁴

Reports indicate that as many as 18% of people suffering from insomnia use alcohol as a treatment.⁵ This may be self initiated or it may be the result of questionable advice provided by a health care provider. Although moderate amounts of alcohol have been found to decrease sleep latency^{1,6,7} and improve sleep initially,⁸ the latter part of the night is characterized by more frequent arousals and disrupted sleep.^{1,7,9} Electroencephalogram (EEG) results support these observations in that initially there is an increase in stage 4 sleep,⁸ later in the night an increase in stage 1 sleep (a significant difference was reported when combined with movement time and wakefulness),⁸ and overall a decrease in total sleep time, percentage of delta sleep, and REM sleep.⁵ In addition, tolerance to these effects may occur within three nights of regular use.^{1,6,7} Related to the development of tolerance is the withdrawal or rebound effect seen on discontinuation of the nightly use of alcohol in which sleep is characterized by increases in REM sleep and wake time and a decrease in deep nonREM sleep.^{1,7} From this information it can be seen that alcohol not only does not have a positive effect on a person's sleep but the effect is quickly lost and termination yields worsening sleep problems.

Combining the disruptive effects of alcohol seen in the early morning hours with the age related changes in sleep patterns described above, it is not unexpected that alcohol worsens these complaints.¹ Although

removal of alcohol from the body does not appear to be affected by aging, aged patients do experience greater effects from alcohol. This has been attributed in part to the age related reduction in body water. Since alcohol is very hydrophilic, reduction in body water causes a decrease in volume of distribution and subsequently higher blood levels. Therefore one drink is considered moderate consumption for an elderly person compared to two drinks for a young male. The central nervous system also may be more sensitive to the effects of alcohol.¹ In general, alcohol in an aged population would be anticipated to produce more deleterious effects.

Alcohol may cause serious problems in patients who have obstructive sleep apnea because of its effect on dilator muscles in the upper airway and the initial reduction in arousal.^{1,7,9} Alcohol's effect in this regard is more profound than even benzodiazepines.^{1,7} Alcohol also may produce headaches and gastritis which yield difficulties in sleeping and potentially other health concerns. Alcohol has been shown to have a greater effect on task performance in an aged population even when blood alcohol levels are controlled and alcohol may also worsen underlying cognitive impairments.¹ Finally, alcohol abuse may produce significant sleep disturbances and may be the source of a patient's sleep complaints.⁹

Therefore, alcohol is not a suitable agent for the treatment of insomnia and an aged person may experience an exacerbation of sleep problems even with as little as one drink. Patients who use alcohol as a treatment for their insomnia may not correlate sleep problems in the early morning hours to the consumption of alcohol. They also may underestimate the negative effects alcohol may cause. Education of patients to the ineffectiveness of alcohol for sleep is of primary importance.

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Edited by Brian Kaatz, Pharm.D.



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Helen Owens, President, South Dakota
State Medical Association Alliance

It's a Family Affair: Doctor's Day Teams Up With Medical Alliance Month

Ever since the 1930's medical alliances/auxiliaries across South Dakota have paid tribute to the physicians in their communities on March 30th — Doctor's Day. I know that you have appreciated your district alliance's efforts to honor you over the years. This year medical spouses are honoring the

physician in their lives by contributing one hour or more of medical education to AMA-ERF. Physicians being honored will be listed in the April issue of the South Dakota Journal of Medicine.

March will be a special month for alliance members for an additional reason. This year March, 1995 will be Medical Alliance Month nationwide. It will be an opportunity for alliance members to celebrate their accomplishments and to increase public awareness of their deep commitment to programs and activities that improve the health of their communities. We hope that this commitment will be especially visible in March with the kick off of the family violence project co-sponsored by the State Medical Alliance and the State Medical Association.

I know that you are thankful for the loving concern shown by your spouse to you and to the community in which you both live. You are justifiably proud of their accomplishments! We would like to give you an opportunity to express your appreciation to your spouse during Medical Alliance Month. Use the coupon below and contribute one or more hours of medical education to AMA-ERF! Your spouse's name will be listed in the spring issue of the South Dakota State Medical Alliance Newsletter. I encourage you to publicly express your pride and honor your spouse in this special way. An accompanying hug would be appreciated as well!

Helen Owens



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REFERENCES: Should be listed in the order in which they appear in the article and should not be more than 20. They should be complete and accurate and include the authors' names and initials, title of article, abbreviated name of Journal, volume number, pages and year of publication. References to books should include authors, title, location and name of publisher, year of publication, edition and page numbers.

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CME Conferences

CME Conferences being held on a regular basis at various health care facilities throughout the state of South Dakota.
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CME CONFERENCES

FEBRUARY 1995

- February 15 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Clinical Pathology Conference, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- February 15 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: William J. Wengs, MD, Topic: How to Build a Better Headache, Info: David Rossing, MD, 331-3490.
- February 15 **Topics in Clinical Medicine - Audio Teleconference Series**; - 12:15 & 1:30 pm CT/CDT, 11:15 am & 12:30 pm MT/MDT; Speaker: Charles O'Brien, MD; Topic: Chest Pain Evaluation; Info: Connie Kleinsasser, USDSM - 357-1480.
- February 16 **Geriatric Forum** - 7:00 am MST, RDT Network Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- February 16 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- February 16 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- February 16 **Neuroscience Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- February 16 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- February 17 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- February 17 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- February 21 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- February 22 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: Martin Oken, MD; Topic: Non-Hodgkin's Lymphoma; Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- February 22 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Dr. Edward Zawada - 339-6790.
- February 22 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Wendell Hoffman, MD, Topic: Emerging Infectious Diseases, Info: David Rossing, MD, 331-3490.
- February 23 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- February 23 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- February 23 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- February 23 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- February 23 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- February 24 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- February 24 **Tumor Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- February 24 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145.
- February 27 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145

MARCH 1995

- March 1 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: Martin Oken, MD, Topic: Rheumatoid Arthritis - New Perspectives on an Old Disease, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- March 1 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Nancy L. Carroll, MD, MD, Topic: Anemia in the Pediatric Patient, Info: David Rossing, MD, 331-3490.
- March 1 **Topics in Clinical Medicine - Audio Teleconference Series**; - 12:15 & 1:30 pm CT/CDT, 11:15 am & 12:30 pm MT/MDT; Speaker: Joseph Stothert, MD, PhD; Topic: Trauma Assessment Part I; Info: Connie Kleinsasser, USDSM - 357-1480.
- March 2 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- March 2 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- March 2 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- March 2 **Clinical Pathology Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: to be announced, Topic: to be announced, Info: Dr's J. Ruggles & R. Thompson, 665-9002.
- March 2 **West River Internal Medicine Grand Rounds** - 2:00 pm, Hot Springs VA Hospital, Speaker: Dr. Robet Talley, Topic: to be announced, Info: Dr. Donald Humphreys - 357-1340 (Kris Karbo).
- March 2 **Biomedical Ethics** - East Auditorium, Rapid City Regional Hospital, Info: Medical Staff Office - 341-8705.

- March 3 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- March 3 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Dana J. Windhorst, MD, Topic: Chemical Hazards in Agriculture, Info: David Rossing, MD, 331-3490.
- March 3 **Morbidity/Mortality Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- March 3 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- March 3 **West River Internal Medicine Grand Rounds** - 11:00 am, Fort Meade VA Hospital, Speaker: Dr. Robert Talley, Topic: to be announced, Info: Dr. Donald Humphreys - 357-1340 (Kris Karbo).
- March 7 **CPR Certification/Recertification** - 7-10:00 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- March 8 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: C. Roger Stoltz, MD, Topic: Pap Smear Technique and How to Handle Abnormal Results, Info: David Rossing, MD, 331-3490.
- March 8 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: James Overall, MD, Topic: Update on Antiviral Chemotherapy, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- March 8 **Dermatology Conference** - 7:30 am, Laboratory of Clinical Medicine, Sioux Falls, Info: Dana - 339-6537.
- March 8 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Dr. Edward Zawada - 339-6790.
- March 9 **Internal Medicine, Tumor Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: To be announced, Topic: To be announced, Info: Dr. J. Ruggles & Dr. R. Thompson, 665-9002.
- March 9 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- March 9 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- March 9 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- March 9 **Cardiac Cath Conference** - 7:30 a.m., McKennan Hospital Auditorium, Info: Cardiopulmonary Dept, 339-8171.
- March 9 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- March 9 **ACLS Renewal Course** - McKennan Hospital, Info: K. Miles - 339-8096 (8.25 hrs).
- March 10 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- March 10 **Pathology Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- March 13 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145
- March 14 **Breast Cancer Conference** - 12:00 noon, Meeting Room B, Sioux Valley Hospital, Info: Dr. Thomas Cink - 333-5244.
- March 15 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Clinical Pathology Conference, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- March 15 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Rodney R. Parry, MD, Topic: Beyond Farmers Lung: Recognition and Management of Farm Related Disorders, Info: David Rossing, MD, 331-3490.
- March 16 **Geriatric Forum** - 7:00 am MDT, RDT Network Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- March 15 **Topics in Clinical Medicine - Audio Teleconference Series**; - 12:15 & 1:30 pm CT/CDT, 11:15 am & 12:30 pm MT/MDT; Speaker: Judy Magnuson, PhD; Topic: What's New in the Laboratory?; Info: Connie Kleinsasser, USDSM - 357-1480.
- March 16 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
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- March 21 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- March 22 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Dr. Edward Zawada - 339-6790.
- March 22 **Forensic Pathology Seminar** - Info: Joan Cleveland, 339-1212.
- March 22 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Richard J. Barth, MD, Topic: Evaluation of the Patient with Thyromegaly, Info: David Rossing, MD, 331-3490.
- March 22 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- March 23 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- March 23 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.

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- March 27 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145
- March 29 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- March 29 **Topics in Clinical Medicine - Audio Teleconference Series**; - 12:15 & 1:30 pm CT/CDT, 11:15 am & 12:30 pm MT/MDT; Speaker: Anthony Salem, MD; Topic: Coagulase Negative Staphylococci: Update; Info: Connie Kleinsasser, USDSM - 357-1480.
- March 30 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- March 31 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.

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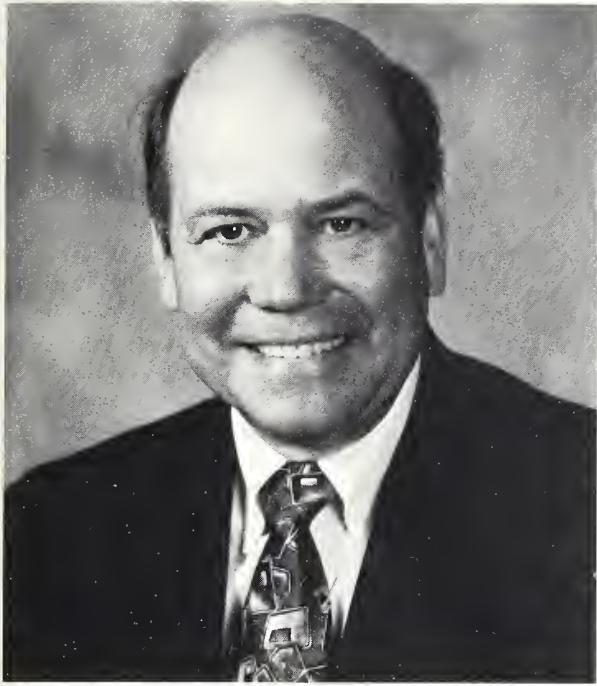
MARCH 1995

- March 4-9 **22nd Annual Critical Care Medicine Course**, Marriott Hotel, Oklahoma City, OK. 48 hrs AAFP & AMA Category 1 credit. Contact: Dora Lee Smith, Coord, Univ Okla Hlth Science Ctr Dept of Med, PO Box 26901, Room 3SP400, Oklahoma City, OK 73190. Phone: (405) 271-5904.
- March 9-10 **Family Medicine Today**, Holiday Inn East, St. Paul, MN. Fee: \$250. 13 hrs AAFP & AMA Category 1 credit. Contact: Registrar, CME, St. Paul-Ramsey Med Ctr, 640 Jackson St, St. Paul, MN 55101. Phone: (612) 221-3992.
- March 16-18 **45th Annual Surgical Forum**, Sheraton Grande Hotel, Los Angeles, CA. Fee: \$475. 20.5 hrs AMA Category 1 credit. Contact: Dir of Med Educ, Society of Grad Surgs, 5820 Wilshire Blvd, #500, Los Angeles, CA 90036. Phone: (213) 937-5514.
- March 24 **HIV Primary Care Conference**, Holiday Inn International Airport Hotel, Bloomington, MN. Fee: \$95. 7 hrs AMA Category 1 credit. Contact: Allina Off of Med Educ & Research, 2810 57th Ave, N, #425, Minneapolis, MN 55430. Phone: (612) 574-7982.
- March 24-26 **Advances in Clinical Anesthesiology**, Silverado Resort, Napa Valley, CA. AMA Category 1 credit avail. Contact: Rita Kunz, Postgraduate Courses, Sec of CME, Mayo Foundation, Rochester, MN 55905. Phone: (800) 323-2688.
- March 27-April 7 **Family Practice Review**, Ctr for Cont Educ, UNMC, Omaha, NE. Fee: \$1150/2 weeks, \$800/1 week. Contact: Ctr for Cont Educ, Univ of Neb Med Ctr, 600 S 42nd St, Omaha, NE 68198-5651. Phone: (800) 642-1095.
- March 30-31 **Critical Care 1995: Practical Approaches & Case Discussions**, St. Paul-Ramsey Med Ctr, St. Paul, MN. 13 hrs AMA Category 1 credit. Contact: CME, Ramsey, 640 Jackson St, St. Paul, MN 55101. Phone: (612) 221-3992.
- March 31 **Gifford Ophthalmology Symposium**, UNMC, Eppley Science Hall, Omaha, NE. Contact: Ctr for Cont Educ, Univ of Neb Med Ctr, 600 S 42nd St, Omaha, NE 68198-5651. Phone: (800) 642-1095.
- March 31-April 2 **Comprehensive HIV Management Update for the Primary Care Physicians**, Palace Hotel, New York, NY. 21 hrs AAFP & AMA Category 1 credit. Contact: Svetlana Lisanti, Course Admin, Ctr for Bio-Medical Communications, 80 W Madison Ave, Dumont, NJ 07628. Phone: (201) 385-8080.

APRIL 1995

- April 6-7 **Annual Obstetrics & Gynecology Update**, St. Paul-Ramsey Med Ctr, St. Paul, MN. 13 hrs AMA Category 1 credit. Contact: CME, Ramsey, 640 Jackson St, St. Paul, MN 55101. Phone: (612) 221-3992.
- April 7-9 **45th Annual Postgraduate Symposium on Anesthesiology**, Ritz-Carlton Hotel, Kansas City, MO. Fee: \$400. 16.5 hrs AMA Category 1 credit. Contact: Off of CME, Univ of Kansas Med Ctr, 3901 Rainbow Blvd, Kansas City, KS 66160-7108. Phone: (913) 588-4488.
- April 9-12 **Management Strategies in Complex Congenital Heart Disease**, Scottsdale Princess Resort, Scottsdale, AZ. Contact: Rita Kunz, Postgraduate Courses, Sec of CME, Mayo Found, Rochester MN 55905. Phone: (800) 323-2688.
- April 21 **15th Annual Infectious Diseases Symposium**, Boys Town Nat'l Research Hosp Aud, Omaha, NE. AMA Category 1 credit avail. Contact: Univ of Neb Med Ctr, Ctr for Cont Educ, 600 S 42nd St, Omaha, NE 68198-5651. Phone: (800) 642-1095.

President's Page



**James R. Reynolds, MD, President
South Dakota State Medical Association**

"Cast thy bread upon the waters, for thou shalt find it after many days."

Ecclesiastics 11:1

You can go home today. What a wonderful statement in medicine whenever it is heard, because it means that the skills of the medical professional team of nurses, pharmacists, therapists, hospital and fellow physicians has been a success. Today, I made this statement to a fellow physician and a long time friend of both myself and the Medical Association.

As a fellow physician once said, "It is like casting your bread upon the water when you help a fellow physician. You'll have many opportunities to be helped in other ways by other doctors." This has certainly been proven time and time again when fellow physicians give generously of their time, not only to other patients, but to fellow physicians and their families. Many times it is given not just for care, but simply for the sake of reassurance. This occurs not only in local communities, but also when friends and relatives in distant communities are sick and physician friends will take the time to express the same warmhearted care and spirit of reassurance. And again, as we send our children off on travels or to schools far from home, giving them names of physicians to contact should the need arise. Likewise, how good it makes us feel when we have a chance to reciprocate these acts of kindness.

In our current time of conflict in medicine and the social and political uncertainty we face, it is comforting to know that there remains a strong sense of camaraderie between the members of our profession. I have certainly sensed this feeling in the membership of our Association at the district medical societies that I have visited this year.

To experience the feeling of giving and receiving, even in the midst of the social and economic upheaval that is now affecting our patients and our profession, makes one realize that there is something amidst that is good. Certainly, this is the bottom line for medicine — doing something that is worthwhile for our fellow man.

James R. Reynolds



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Alternate Site Testing in Hospitals — Place in the Future?

Other names for alternate site testing include point of care or bedside testing. It really means not in the central laboratory. In actual fact, it often does not take place at the bedside. Examples include dipstick urinalysis, occult blood testing and blood glucose testing on glucometers on the wards or floors or some laboratories in the operating rooms or near emergency rooms. Historically, this type of testing is not new. The clinical ward laboratory was a standard fixture of the past. Increasing complexity of laboratory testing and automation along with quality control considerations shifted the major burden to the central laboratory. There is now some shift back to patient areas.

Several changes have spurred the regrowth of alternate site testing. One is technical advances in biosensors and instruments which can rapidly make determinations such as electrolytes or blood gases, coagulation tests and basic hematology. Another is desire for more rapid turnaround time (TAT). Manufacturers have suggested tests can be performed rapidly, easily and accurately by relatively easily operated instruments — "anyone can do it". Of course, they have a major vested interest but some excellent technology is present. The claims are exaggerated since it is still true that nothing is so simple you cannot do it wrong and the deceptively easy instrumentation can produce bizarre results unless traditional quality control procedures are followed. Inaccurate results also occur because not only is proper instrument performance necessary, but a properly collected appropriate sample is mandatory for useful results.

Another factor which must be discussed is cost. Usually the cost of alternate site testing is greater than the cost of the same procedure performed in the central laboratory. With emphasis on managed care and cost sharing among providers, the most cost efficient mechanism of producing laboratory results may be of import. To my knowledge no one has shown alternate site testing to decrease the length of hospital stay.

Does this suggest an "all or nothing" solution? NO! For reasons above there will be more alternate site testing but each test or situation has to be evaluated not only as to cost but as to quality and whether more rapid TAT is really achieved. Each problem may have more than one solution. Alternate site may be the best on some occasions. Most of all we must maintain an open attitude.

Lastly, we must come back to the maintenance of the best possible quality. It would be easy to say, at this point, that federal, state and professional society regulations from CLIA (Clinical Laboratory Improve-

ment Act), JCAHO (Joint Commission), CAP (College of American Pathologists) mandate certain processes but actually these regulations do address important quality issues. I will list some necessary components for bedside testing:

1. A specifically designated individual (or individuals) should be responsible for the organization, administration and quality assurance of the program.
2. A complete written procedure manual should exist for all aspects of the program.
3. An organized training program should exist for operators.
4. Quality control testing should be performed on each instrument, daily or by shift, with two levels of control material.
5. A system should be maintained to monitor and document current competence of the operators.
6. Internal proficiency testing should be carried out — a mechanism to compare the bedside result with a comparable result from the main laboratory within the institution.
7. External proficiency testing should be carried out — a mechanism to measure the institutions bedside testing performance on specimens provided by an independent outside organization.
8. Identify and recognize the bias of the particular bedside instrument in use.
9. Acknowledge special circumstances. Set limits/restrictions on bedside testing according to instrument performance, such as hematocrit and blood glucose concentration for bedside glucose testing.
10. Provide for and perform regular instrument maintenance and cleaning.
11. Continue to monitor all of the above and act rapidly and appropriately.

This seems like a lot, and it is; but these are the principles of good laboratory testing.

It can be done and is being accomplished in many hospitals. In our hospital laboratory a joint project between the laboratory and the nursing service for bedside glucose testing has been in place for some years. The monitoring functions for proficiency testing and laboratory expertise has been provided by the laboratory. The glucose testing is performed by over 800 individual nurses at over 30 sites. Over time the

precision and accuracy has greatly improved but not without significant effort. Other projects are already being evaluated by laboratory and nursing personnel.

I am sure many readers have had similar experience and, like us, it has not been without many problems but quality can and must be maintained.

John F. Barlow, MD
Editor

REFERENCE

Handorf CR: Alternate site laboratory testing. *Clinics in Lab Med*, September 1994.

Medical Liability Specialists



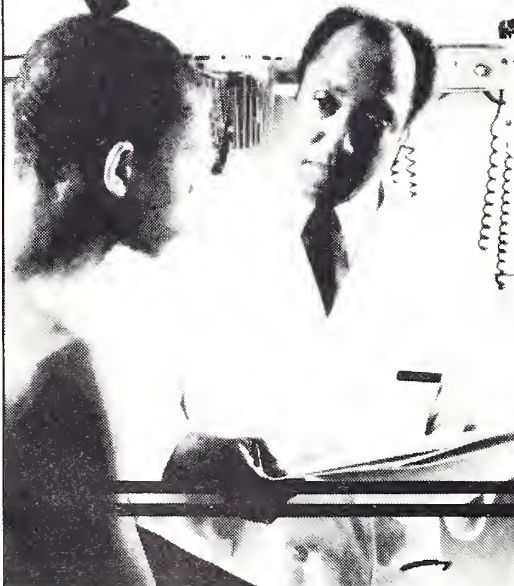
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Idiopathic Pulmonary Hemosiderosis and Alveolar Hemorrhage Syndrome: Case Report and Review of the Literature

Maher A. Rezkalla, MD and Jerry L. Simmons, MD

ABSTRACT

The presence of widespread hemorrhage from the microvasculature of the lung into the alveolar spaces defines what is called the "alveolar hemorrhage syndrome", which can occur in association with a wide variety of clinical disorders. The cardinal manifestations of this syndrome include: hemoptysis, unexplained anemia and diffuse alveolar infiltrates on chest roentgenograms. Since the pulmonary features are similar, the diagnosis usually depends on the clinical, laboratory and pathologic evaluations. Early diagnosis and treatment is crucial since the occurrence of pulmonary hemorrhage in this syndrome may represent a catastrophic event with fatal consequences. Idiopathic pulmonary hemosiderosis (IPH) has been identified as a cause of alveolar hemorrhage in a small number of cases, mainly by exclusion criteria. We report a case of a 70-year old man who presented with a 40-year history of intermittent hemoptysis and bilateral upper lobes alveolar infiltrates proved to be secondary to idiopathic pulmonary hemosiderosis. Although the lung apices are frequently spared in IPH, they were the site of the infiltrates in our case. To our knowledge, our patient had the longest survival time ever reported in the literature in adult IPH. A brief review of some of the disorders commonly associated with alveolar hemorrhage is also presented.

CASE REPORT

A 70-year old African American male, with multiple medical problems including a 20-year history of insulin dependent diabetes mellitus with secondary diabetic neuropathy, nephropathy, and retinopathy and a history of peripheral vascular disease, hypertension, normocytic-monochromic anemia, and congestive heart failure secondary to coronary artery disease, presented to our hospital with a chief complaint of intermittent, mild, self-limited hemoptysis (mostly blood tinged sputum) for 40 years, but no chest pain, fever, chills, night sweats, orthopnea or PND. Chest roentgenogram and CAT scan of the lungs showed bilateral upper lobes alveolar type infiltrates and no signs of congestive failure. Initial work-up did not disclose a specific etiology of the hemoptysis. Bronchoscopy did not disclose a site of bleeding. Bronchial washings were negative for bacterial, tuberculous, viral, fungal and Legionella infections. Due to persistence of the upper lobe infiltrates, a right thoracotomy with lung biopsy was performed. Tissue cultures were negative with the exception of an atypical mycobacterium on special stains. The histologic find-

ings revealed marked interstitial fibrosis, reactive pneumocytes with intra-alveolar hemorrhage and hemosiderin laden macrophages. There was no evidence of neoplasms or granulomas. Isoniazid and rifampin were started, but he was switched to rifampin, ethambutol and ciprofloxacin when cultures grew Mycobacterium Avium Interacellar. HIV testing was negative by ELISA. The patient was discharged home. Several weeks later he was re-admitted for increasing episodes of hemoptysis and a decreasing hemoglobin. The review of systems was unremarkable except for the increasing episodes of hemoptysis. Physical examination revealed an elderly male in no acute distress. Vital signs revealed a B/P 130/80mmHg, pulse 90/min, temperature 97.7°, and a respiratory rate of 20/min. His neck exam did not show any evidence of lymphadenopathy or jugular venous distention. Lung exam revealed bilateral coarse rhonchi which were greater on the right and mildly decreased breath sounds bilaterally. The heart revealed a regular rate and rhythm with a grade II/IV ejection systolic murmur. The abdomen was soft and non-tender. The ex-

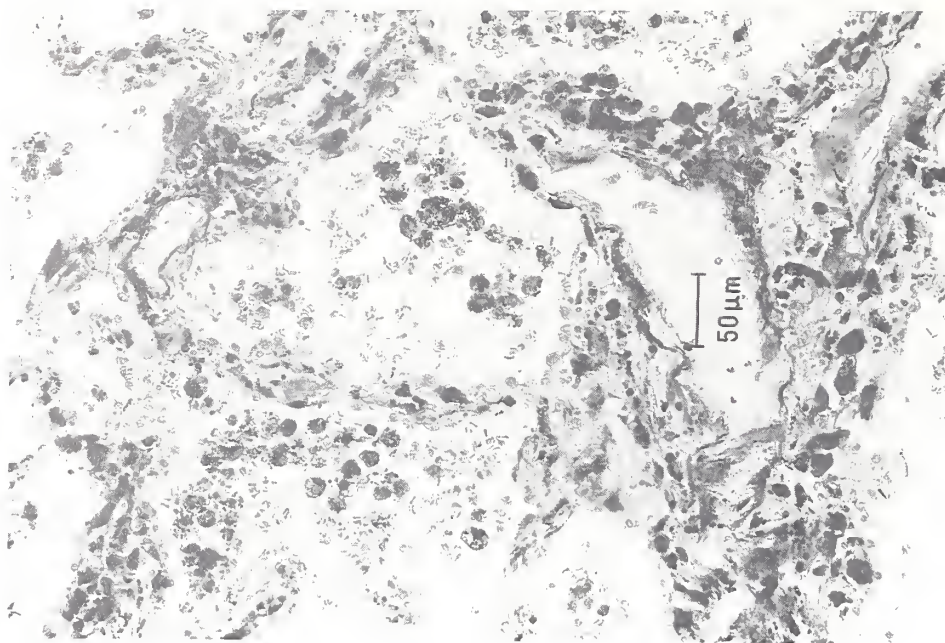


Figure 1

Lung section stained for iron. Notice the abundant positive black granules in alveolar macrophages.

tremities showed a trace of edema. The remainder of his examination was unremarkable.

Laboratory studies revealed WBC 5.7 K/cmn (4.8-10), hgb 9.2 gm/dl (14-18), hct 24% (42-52), MCV 67 cmu (80-94), and platelet 376 K/Cmm (130-400). Electrolytes were normal. Blood sugar 241 mg/dl, BUN 47 mg/dl (7-22), Cr 2.3 mg/dl (.7-1.3) with his baseline Cr 1.9-2.1 mg/dl. Prothrombin time, partial thromboplastin time, and bleeding time were within normal limits. A chemistry was normal except for a mildly elevated LDH 869 U/L (247-537) and T.bili 0.4 mg/dl (.2-1.3). Urinalysis revealed 30 mg/dl protein, 1-5 WBC, 1-5 RBC, +2 bacteria, and a negative gram stain. Arterial blood gases showed a PH of 7.44, PCO₂ 35 mmHg, PO₂ 68 mmHg, and oxygen saturation of 91%. EKG showed sinus tachycardia and an old anterior wall myocardial infarction. Chest roentgenogram demonstrated bilateral upper lobe alveolar infiltrates unchanged from his previous chest roentgenogram.

Bronchoscopy revealed brownish secretions and blood throughout the tracheobronchial tree. No acute bleeding sites or endobronchial lesions were noted. During the procedure the patient had a respiratory arrest which required intubation and mechanical ventilation. A Swan Ganz catheter was placed and revealed moderate pulmonary hypertension. The central venous pressure was 8mmHg, the right ventricular pressure was 48/4mmHg, the pulmonary artery wedge pressure was 13mmHg, the cardiac output was 5.5 liters/min, the cardiac index was 2.8 liters/min/m², and the systemic vascular resistance was 976 dynes/sec/cm⁵. The patient's hospital course waxed and waned and he died on the 11th hospital day.

The autopsy findings can be summarized as follows: Sections of the lung parenchyma revealed moderate to focally severe interstitial fibrosis, marked vascular congestion and marked hemosiderin deposition in the intra-alveolar spaces and disrupted intra-alveolar septa with reactive alveolar lining cells. Prussian blue stains of lung tissue confirmed the marked iron deposition with heavy staining for iron in the intra-alveolar spaces and intra-alveolar septa. (Figure 1) No acid fast, fungal or bacterial organisms were identified on special stains of the lung tissue or peribronchial node tissue. A single granuloma was identified in the right lower lobe with no fungal or acid

fast organisms demonstrated on special stains. No gross or histologic evidence of bronchiectasis or a neoplastic process were identified. There was no evidence of acute inflammation, vasculitis or pulmonary emboli. Examination of the kidneys revealed mild to moderate nephrosclerosis and focal nodular thickening of capillary loops suggestive of Kimmelstiel-Wilson syndrome with no evidence of vasculitis or immune deposition on immunofluorescence staining. Marked iron deposition was present only in the lung.

DISCUSSION

This patient's clinical and radiologic findings fit what is called the "alveolar hemorrhage syndrome". This syndrome is primarily the presence of extravasated blood in the pulmonary parenchyma.¹ The cardinal manifestations of the alveolar hemorrhage syndrome include: hemoptysis, diffuse alveolar infiltrates on chest roentgenogram, anemia, dyspnea and hypoxia.³ Since the pulmonary features are similar in each of the alveolar hemorrhage disorders, the diagnosis usually depends on the clinical, laboratory and pathologic evaluations.

There is no uniformly accepted scheme for classifying the alveolar hemorrhage syndrome. The most accepted classification was initially employed by Leatherman et al in 1984⁴ and includes 5 major categories: 1) alveolar hemorrhage in anti-basement membrane antibody disease; 2) alveolar hemorrhage in systemic vasculitides and collagen vascular disease; 3) alveolar hemorrhage in idiopathic rapidly progressive glomerulonephritis; 4) alveolar hemorrhage secondary to exogenous agents; 5) alveolar hemorrhage in idiopathic pulmonary hemosiderosis. (Table I)

Table I

Alveolar Hemorrhage (AH) Syndromes

- I. AH in ant basement membrane antibody disease
- II. AH in collagen vascular disease and systemic vasculitides
 1. Systemic vasculitides
 - a. Wegener's granulomatosis
 - b. Systemic necrotizing vasculitis
 - c. Polyarteritis nodosa
 - d. Henoch-Schonlein purpura
 - e. Essential mixed cryoglobulinemia
 2. Systemic lupus erythematosus (SLE)
 3. Collagen vascular diseases other than SLE
- III. AH in idiopathic rapidly progressive glomerulonephritis (RPGN)
- IV. AH due to exogenous agents
- V. AH in idiopathic pulmonary hemosiderosis

The following is a brief discussion of each of these categories.

Alveolar Hemorrhage in Anti-basement Membrane Antibody Disease

The eponym "Goodpasture's Syndrome" is probably the one category of the alveolar hemorrhage syndrome that has attracted most of the attention in the medical literature since Ernest Goodpasture described his first case report in 1919 following the first influenza pandemic. It wasn't until 1967 that the diagnostic criteria for Goodpasture's syndrome were formally established, which are: (1) glomerulonephritis (commonly rapidly progressive or crescentic glomerulonephritis); (2) lung hemorrhage; and (3) anti-glomerular basement membrane (anti-GBM) antibody formation.

In anti-basement membrane antibody (ABMA) disease, the anti-basement membrane antibody binds specifically to the basement membrane antigens of the alveolus, glomerulus, renal tubule, and choroid plexus, and produce linear IgG deposits along the respective basement membranes. IgA or IgM deposits have been reported on rare occasions.^{2,9,14} Sixty percent to 80% of patients have both alveolar hemorrhage and glomerulonephritis and the remaining patients have only glomerulonephritis or, on rare occasions, isolated alveolar hemorrhage. Currently, little is known about factors that induce the anti-GBM antibody response, but genetic factors, environmental factors, as well as drugs (notably methicillin and phenytoin), have all been implicated. In addition, other factors that increase capillary permeability and/or promote the binding of anti-GBM antibodies to the lung basement membrane may be necessary for the alveolar hemorrhage to occur. Cigarette smoking has been described recently as an

important co-determinant of alveolar hemorrhage in human ABMA disease.⁷

ABMA disease can present with a variety of clinical presentations. The typical manifestations of Goodpasture's syndrome are present in nearly half of all cases. In most cases, the presenting features are hemoptysis, anemia, exertional dyspnea and chest roentgenogram infiltrates.⁵ Serum measurements of anti-GBM antibodies are positive in greater than 90% of all cases.⁸ Serum anti-GBM antibodies can be detected most reliably (97%) by radioimmunoassay or by enzyme-linked immunosorbent assay (ELISA). Indirect immunofluorescence provides a less sensitive (80%) but rapid and specific assay.¹ There is no clear cut relationship between the level of circulating anti-GBM antibodies and the occurrence of pulmonary hemorrhage. Likewise, neither new episodes of alveolar hemorrhage nor their severity correlates well with the serum level of anti-GBM antibodies.⁶

The histopathology of ABMA disease related alveolar hemorrhage is non-specific. The dominant features in the lung are intra-alveolar hemorrhage and hemosiderin leading macrophages. Alveolar septal necrosis and vasculitis are typically absent and immunofluorescence studies usually reveal linear deposits of IgG and C3 along the alveolar septa.^{2,8} The renal biopsy in Goodpasture's Syndrome, as well as in ABMA disease, is usually diagnostic. Whereas light microscopy may reveal focal or diffuse glomerulonephritis, often with crescents and necrosis, the immunofluorescence microscopy usually shows the linear deposition of IgG, C3 and very rarely IgA or IgM along glomerular capillary walls.^{1,5,10,11} The early diagnosis of this disease can be particularly challenging when evidence of glomerulonephritis is minimal or absent, therefore, the measurement of the anti-GBM antibodies and a renal biopsy are very important in the diagnostic evaluation of patients with suspected ABMA disease. Isolated alveolar hemorrhage due to ABMA disease confirmed on renal biopsy, but with normal renal function and urinary sediment has been reported^{17,18} and probably emphasizes the importance of renal biopsy in the diagnostic evaluation of suspected cases. This distinct subgroup of ABMA disease appears to have an excellent prognosis and usually responds to less aggressive therapy.^{17,18}

Plasma exchange with immunosuppression is probably the treatment of choice for ABMA disease at present.¹³ The rationale of combined therapy is to remove the anti-GBM antibodies rapidly by plasma exchange and to prevent its resynthesis by immunosuppressive agents. Cyclophosphamide (and/or azathioprine) therapy must also be initiated early in doses of 2.5mg/kg/d, followed by 2mg/kg/d in maintenance doses. The dose is titrated to keep the WBC $\geq 5000/\text{mm}^3$. High dose methylprednisolone 1-2gm per day is also effective in the treatment of ABMA disease.^{10,14,15,16} Bilateral nephrectomy has little or no role in the management of alveolar hemorrhage.

Alveolar Hemorrhage in Systemic Vasculitides and Collagen Vascular Diseases

Systemic vasculitides

The essential feature of the vasculitides syndromes is inflammation of the blood vessel walls.²⁶

The following comments will focus on some of the vasculitides which can present with alveolar hemorrhage.

Wegener's granulomatosis

Diffuse alveolar hemorrhage is an unusual, but well documented manifestation of Wegener's granulomatosis. Although alveolar hemorrhage is present on admission or soon thereafter in the majority of reported cases,³² the occurrence of pulmonary hemorrhage before the development of other manifestation of Wegener's granulomatosis is not uncommon so that the definitive diagnosis is often delayed. The great majority of these patients have rapidly progressive glomerulonephritis at presentation with the development of extra-pulmonary manifestations later. The histopathologic exam in almost every case reveals granulomatous inflammation with vasculitis. There may be one or two cases reported in the literature⁵¹ with localized Wegener's granulomatosis relapsing as diffuse massive intra-alveolar hemorrhage with fatal outcome. The histologic exam, again, in these cases, was typical of Wegener's granulomatosis.

The availability of ANCA (anti-neutrophil cytoplasmic autoantibodies) testing has made the early confirmation of the diagnosis of Wegener's granulomatosis possible, before the tragic development of generalized disease. The indirect immunofluorescence method remains the mainstay of ANCA determination and the "gold standard" of sensitivity.²⁵ It also allows the distinction between the C-ANCA (coarse granular, cytoplasmic fluorescence), the P-ANCA (perinuclear) and the atypical ANCA (diffuse cytoplasmic staining) on ethanol fixed neutrophil preparations. The characteristic C-ANCA pattern is caused by antibodies against proteinase 3 (PR₃), while antibodies against myeloperoxidase (MPO), elastase, cathepsin G, lactoferrin, and lysozyme have been identified as the cause of the P-ANCA. The C-ANCA has a high specificity for Wegener's granulomatosis and can be present occasionally in patients with isolated pauci-immune necrotizing crescentic glomerulonephritis with or without alveolar hemorrhage. The sensitivity of C-ANCA, however, is limited and varies with the extent and disease activity. During the systemic vasculitic phase of the disease, the sensitivity is about 90%, but decreases to 65% in patients with granulomatous disease limited to both upper and lower respiratory tract. It further decreases to about 30% in patients with complete remission.²⁵ Whether patients in complete remission with persistently detectable C-ANCA have a higher risk for relapse or whether an increase in their C-ANCA titer precedes clinical relapse is still controversial.

The P-ANCA (with specificity against MPO as a target antigen) have been found to be closely associated with microscopic polyangiitis, pauci-immune necrotizing-crescentic glomerulonephritis, idiopathic necrotizing-crescentic glomerulonephritis, the alveolar hemorrhage syndromes with or without glomerulonephritis and Churg-Strauss syndrome.²⁵

Pol Boudes⁵³ has recently described a new form of Wegener's granulomatosis called "purely granulomatous Wegener's granulomatosis (PGWG)". Based on the concept that granuloma may represent the first and only manifestation of Wegener's granulomatosis, preceding the occurrence of localized and/or generalized vasculitis.⁵³ The C-ANCA has been particularly useful in diagnosing such cases.

Systemic Necrotizing Vasculitis

The incidence of alveolar hemorrhage in systemic necrotizing vasculitis was as high as 19% of the total cases that presented with the alveolar hemorrhage syndrome at the University of Minnesota and affiliated hospitals.⁴ Although pulmonary hemorrhage may be the initial manifestation,^{27,28} this is usually followed by evidence of extra-pulmonary disease in almost every patient. The lung exam usually reveals necrotizing alveolitis with or without vasculitis. Widespread necrotizing vasculitis, as well as glomerulonephritis, are present in most patients.

Systemic lupus erythematosus (SLE)

Although there are a few well documented cases of SLE-related alveolar hemorrhage in the literature, alveolar hemorrhage as an initial manifestation of systemic lupus erythematosus appears to be an exceedingly rare event. To our knowledge, alveolar hemorrhage was the initial manifestation of systemic lupus erythematosus in only two reported cases in the literature,^{19,20} and was followed by the development of florid and fatal disseminated lupus erythematosus with typical histologic findings. The majority of patients presented with SLE-related alveolar hemorrhage died, often within a few days despite aggressive steroid therapy. Pulmonary hemorrhage was a major contributing factor to their death. In the majority of reported cases, immunofluorescence staining revealed granular deposits of IgG and C3 along the alveolar septa and sometimes within the blood vessel walls. Four patients, reported by Eagen et al, also had serologic evidence suggesting circulating immune complexes at the onset of pulmonary hemorrhage.^{21,22}

The relationship between other collagen vascular diseases (like rheumatoid arthritis) and alveolar hemorrhage is not clear^{23,24} and it is possible that these individuals suffered from two unrelated disorders.

Miscellaneous vasculitides

There are a few reported cases of alveolar hemorrhage in polyarteritis nodosa and Henoch-Schonlein purpura as well as a single case of alveolar hemorrhage in essential mixed cryoglobulinemia.²⁹⁻³¹ Again these

patients presented with typical clinical features as well as characteristic autopsy findings.

Alveolar Hemorrhage in Idiopathic Rapidly Progressive Glomerulonephritis (RPGN)

It is clear that idiopathic RPGN is far from a homogeneous disease. The variations in the underlying pathogenetic mechanisms responsible for RPGN can be revealed by immunofluorescent studies of renal biopsies. In approximately 1/3 of cases of idiopathic RPGN, linear deposits of IgG and C3 are present. Circulating anti-GBM antibodies are usually found in this group and patients falling into this pathogenetic subgroup tend to have normal serum complement and a marked tendency to develop hemoptysis. Another 1/3 of cases will have findings indicative of immune-complex-mediated disease, namely, granular deposits of immunoglobulin by immunofluorescence microscopy and electron-dense deposits by electron microscopy. This tends to occur in older individuals and tends to produce more constitutional symptoms. Alveolar hemorrhage can occur in these individuals and the circulating anti-GBM antibodies are usually absent. The remaining cases of idiopathic RPGN reveal few or no immunoglobulins or complement by immunofluorescence. Although alveolar hemorrhage can also occur in this group of patients, it is usually mild and transient in all reported cases. The pathogenesis of immunofluorescent negative idiopathic RPGN with alveolar hemorrhage is obscure and to date there is no satisfactory explanation for the lung disease in this group of patients. It is possible that the process is really an immune complex disease but that the immune complexes have been removed by the granulocytes, or have in some other way escaped detection.⁴⁹

The hallmark and characteristic light microscopy findings in all these groups is the crescent formation. The extent and the degree of glomeruli involved varies considerably. When more than 70% of the glomeruli are involved, there tends to be rapid deterioration in renal function.

Alveolar Hemorrhage Secondary to Exogenous Agents and Miscellaneous Causes

Alveolar hemorrhage has been reported with the use of D-penicillamine (possible cryoglobulin or immune complex induction) and after exposure to trimellitic anhydride (mechanism unclear, possibly an immunologic event), a chemical used in the manufacture of plastics, paints and epoxy resin coatings. Alveolar hemorrhage has been reported very rarely after lymphangiograms.⁴ There are also two reported cases of pulmonary hemorrhage associated with acute renal failure associated with diabetes. Diffuse pulmonary hemorrhage can also occur as a result of a variety of infections in immunocompromised hosts. These include viral (herpes and CMV), bacterial and fungal infections. Cardiovascular disorders such as mitral stenosis, pulmonary veno-occlusive disease as well as bleeding diatheses can also cause diffuse pulmonary hemorrhage.⁴⁹

Alveolar hemorrhage in idiopathic pulmonary hemosiderosis

Idiopathic pulmonary hemosiderosis, first described by Virchow in 1856 as "brown lung induration", has been recognized as a cause of alveolar hemorrhage in a small group of patients who develop recurrent alveolar hemorrhage in the absence of extrapulmonary disease and with no evidence of an immune etiology. It is essentially a diagnosis of exclusions. IPH occurs commonly in children who are less than 10 years old or young adults in their second or third decades, although cases of elderly patients have also been reported. There is no sex predominance except in the adult form where men appear to be affected more often than women. This syndrome is usually manifested clinically by recurrent hemoptysis, chronic cough, iron deficiency anemia, weight loss, generalized lymphadenopathy, and hepatosplenomegaly. Clubbing may also be present in about 15% - 20% of cases. Although iron-deficiency anemia is so characteristic of the disease, it may not be present when intrapulmonary hemorrhage is small, and it does not generally deplete the bone marrow iron stores. Hemolysis generally does not occur. Pulmonary function tests often give a distinctive pattern with a decreased diffusing capacity, with or without a fall in resting arterial oxygen tension. The chest roentgenogram can range from transient, blotchy, alveolar infiltrates to nodulation, fibrosis and cor pulmonale in chronic cases.¹ The lung apices and the costophrenic angles are frequently spared with few exceptions. Recently, Rubin et al,⁴⁶ described how MRI imaging was helpful in the early diagnosis of IPH in a 2 1/2 year old boy before the diagnosis was confirmed by open lung biopsy.

The pathogenesis of IPH is still unknown. However, its clinical similarity to ABMA disease, its occasional responsiveness to immunosuppressive therapy, the increase in serum IgA in over 50% of cases, as well as its association with celiac sprue, all point to unrecognized immunopathogenesis.^{43,52}

The histopathologic features of IPH include: intra-alveolar hemorrhage, hemosiderin-laden macrophages, and varying degrees of interstitial fibrosis, without evidence of inflammation, vasculitis or immune complex deposition.^{45,41} Iron deposition and iron content in the lung depends on the duration the disease.

While the childhood form of IPH has an aggressive course with a mean survival of about 3 years, the adult form of IPH tends to be more insidious with survival up to 20 years from the onset of symptoms. Plasmapheresis has been used with apparent success in treating IPH.⁴⁷ There are also isolated reports of remission following therapy with azathioprine.⁴⁸ Corticosteroid seems to be useful in controlling the acute episodes but do not clearly alter the long term prognosis.⁴¹ In patients with both IPH and celiac disease, a gluten-free diet can lead to clinical improvement of both diseases.⁵²

SUMMARY

The diagnosis of "alveolar hemorrhage syndrome" should be suspected in any clinical setting of hemoptysis, unexplained anemia, hypoxemia and alveolar infiltrates on chest roentgenogram. Alveolar hemorrhage is usually a manifestation of a systemic disease, so a careful history and physical examination is very important.

The recommended laboratory assessment should include sequential hemoglobins, serum creatinine, urine analysis, sedimentation rate, serum antiGBM antibodies and serum ANCA levels. Antinuclear antibody titers, serum complement, and serum cryoglobulins can be helpful in some cases.

High dose corticosteroids (1-2g/d) are recommended as soon as the presumptive diagnosis of alveolar hemorrhage is made. The early use of plasma exchange as well as immunosuppressive therapy is also recommended, depending on the underlying etiology.

We believe that our patient had a forty year history of intermittent hemoptysis due to idiopathic pulmonary hemosiderosis. He had no evidence of any infectious or neoplastic processes. There was no evidence of a bleeding diatheses or any history of toxic exposure. He had no clinical, laboratory or histologic evidence of a systemic vasculitis or connective tissue disease. Examination of the lungs revealed no evidence of acute inflammation, emboli, lung infarction, or any evidence of granulomatous involvement of the lung (with the exception of one). Although he had a long history of coronary artery disease and congestive heart failure, a 2D echocardiogram did not demonstrate evidence of mitral valve stenosis, prolapse of the mitral valve, or a pericardial effusion. The long history of hemoptysis, the relatively normal Swan-Ganz parameters (with the exception of pulmonary hypertension), and the location of the infiltrates (bilateral upper lobe) argue against a cardiac cause for his presentation. The kidney exam also did not reveal any histologic evidence to suggest Goodpasture's syndrome and the immunofluorescence staining in both lung and kidney were negative. Based on the long history of hemoptysis (which probably started before the age of 30) and the marked iron deposition in the lungs with moderate severe interstitial fibrosis, we believe that the most likely diagnosis is idiopathic pulmonary hemosiderosis. Although the lung apices are frequently spared in IPH, they were the site of the initial infiltrates in our patient. Among all reported cases of IPH in adults, our patient probably survived the longest (more than 40 years from the onset of his symptoms).⁵⁰ To our knowledge, this is probably the longest survival time ever reported in the literature in a patient with IPH.

AUTHORS

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South Dakota Foundation for Medical Care

South Dakota Foundation for Medical Care Update

from Dr Gerald Tracy, Medical Director

Until recently, SDFMC has monitored quality of care mainly through intensive review of individual hospital medical records. In July 1993, the Health Care Financing Administration (HCFA) implemented the Health Care Quality Improvement Program (HCQIP).

The HCQIP is a profound change for PROs and over the next five years it is expected that this program's efforts will be directed at working with local health care providers to improve patient care. Together with South Dakota physicians, SDFMC will develop practice parameters to measure quality of care. Because PROs can do more to improve the quality and cost effectiveness of care by bringing typical care into line with best practices, it will no longer be necessary to inspect individual cases for individual error .

HCFA has developed a system utilizing data abstracting centers to collect patient care information, allowing PROs, hospitals, and physicians to interpret variations in practices and learn to form a consensus on best patient care practices. Under this plan, Clinical Data Abstraction Centers (CDACs) will begin to collect and profile information in early 1995. Hospitals will provide copied charts to the CDAC for this purpose. All clinical data collected by the CDAC will be provided to the local PRO for analysis. Each PRO will then work to help hospitals interpret and apply the findings of their analysis.

Over the next five years, physicians, hospitals, and the PRO will seek to build a community of those committed to improving quality. It remains our goal to promote quality health care services for Medicare beneficiaries and to determine if services rendered are medically necessary, appropriate, and meet professionally recognized standards of care. The redirection of PRO efforts takes emphasis from individual chart error and focuses PRO attention toward helping hospitals and practitioners in meeting their commitment to provide the best possible care.

Extenuating Circumstances

A periodic column of personal, ethical and socioeconomic reflections on medicine.

A Recent Inductee in the South Dakota Hall of Fame: Phil Gross, MD

Ardyce Habeger Samp

Phil Gross, MD, retired Sioux Falls physician, surgeon and educator, was inducted into the South Dakota Hall of Fame at the 1994 Recognition Banquet held on October 1, 1994 in Mitchell, South Dakota.

The criteria for induction to receive this distinction is outlined in the by-laws as: "The South Dakota Hall of Fame is organized for the purpose of recognizing and honoring pioneers and outstanding leaders from all walks of life who have contributed to the heritage and development of South Dakota."

Gross, a native of South Dakota, was honored for his pioneering work in the medical profession for his many contributions to orthopedic surgery. He introduced total hip replacement surgery to South Dakota. The first operation was performed at a Sioux Falls hospital in 1970. It has since become routine in the treatment of hip disease.

Dr Gross was born and raised in Freeman, South Dakota. His father, Henry L. Gross, a Hutchinson county judge, and his mother, Olivia Hirsch Gross, a nurse, directed their son into the medical field. Dr Gross says, "As early as five years of age, I was told that I would be a doctor and I never questioned their decision nor do I have any regrets."

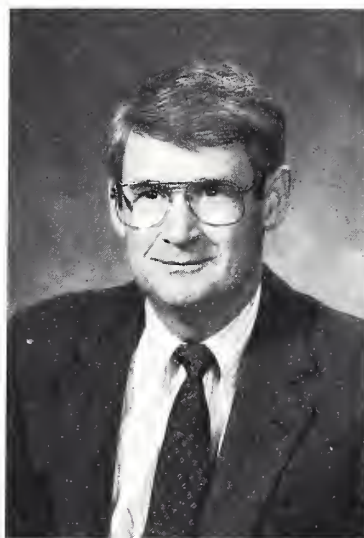
After attending the University of South Dakota for a two-year pre-med program, he transferred to Washington University, St. Louis, where he received his medical degree in 1955.

From there he began a long training program at the University of Michigan, Ann Arbor, which was interrupted by a two-year duty as Captain in the United States Air Force serving as base physician at Vandenberg Air Base, Germany.

He completed his orthopedic studies in 1962 and then was accepted as a Fulbright Scholar. He joined the staff of the Orthopedic Clinic in Heidelberg, Germany, working with children, including victims of maternal thalidomide usage.

From 1963-1988, he was an orthopedic surgeon in Sioux Falls. He notes: "I wanted to practice where I understood the people, their work and their culture and I have always loved South Dakota."

Gross took a sabbatical leave in 1982 and donated his services to a mission hospital in Katmandu, Nepal. During those six months, he worked under primitive conditions, operating long hours on a vast number of cases: congenital abnormalities, tuberculosis and other



H. Phil Gross, MD

infections of the spine and long bones. He continues his interest by supporting the doctors working in Nepal.

One of Dr Gross' goals has been to educate professionals in his specialty. He has over twenty published articles concerning various aspects of orthopedic surgery. These papers have been published in state and national medical journals.

Gross retired from active practice in 1989. He has been actively involved in the study of medical ethics, and is working through a Bush Foundation Fellowship at the University of California at Berkeley. Also, he is now serving on the National Board of Ethics of the American Academy of Orthopedic Surgeons.

He is married to the former Jo Vaughn, also a South Dakota native. Prior to Gross' retirement, he and his wife founded The Banquet, a community outreach center to feed the poor and disadvantaged in the Sioux Falls area. That project has continued to expand and is a major social agency for helping the needy in the Sioux Empire.

Dr Gross' early retirement was the result of a physical disability which he has turned into a challenge and an opportunity to help others relate to people with handicapping conditions. He attempts to dispel the discomfort old friends and acquaintances feel when they encounter someone who has developed a significant handicap. Gross says: "A few year ago when I attended our yearly meeting in a wheelchair, my colleagues were stunned that one of their own was afflicted with a problem they could not fix. It has taken almost two years to regain my acceptance with the group, even though I had been a member for twenty years and a past president of the organization. Now, however, I stand tall again (albeit in a wheelchair) as a spokesman for the patient. In fact, once the adjustment was made, the

group has seized upon the opportunity to learn all they can from me. And I am able to bring an important perspective to their deliberations."

"It is this voice for the patient's perspective that I am trying to develop and to which I am committed. As with most troubled victims, people with disabilities learn to live one day at a time. It is still a jolt to wake up in the morning and realize the circumstances, but courage comes. In the meantime, I continue to study, to write, and to speak for those who are not as privileged as I am. Jo, my wife, is a great help to me and between the two of us, I hope that we can still make a contribution to the coming generations."

Dr Gross sums up his philosophy of life as trying to live by the old adage "to cure sometimes, to care always."

AUTHOR

Ardyce Habeger Samp, author and free-lance writer, Flandreau, SD. She wrote for the Sioux Falls Argus Leader and other papers for 22 years. She also contributes to the South Dakota Liner (REA) Magazine and the South Dakota Hall of Fame Magazine, and is the author of the book "When Coffee Was a Nickel", now in its fourth printing.

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A REPORT TO DONORS AND FRIENDS

Rome Kassirer, M.D., editor-in-chief of the *New England Journal of Medicine*, recently commented on medicine and health information technology. "Widespread social transformations have often been triggered by technology," he declared, "and to ignore the remarkable technological advances at our doorstep doesn't make any sense."

Taking advantage of these changes, on the other hand, is expensive. The South Dakota Health Sciences Information Center will cost \$4.25 million. An initial investment of \$2.5 million will finance construction.

This investment can only be assembled with private charitable support. Through December 31, 1994, total gifts and pledges to the South Dakota Health Sciences Information Center Campaign exceeded \$1.1 million.

Campaign leaders and the UDS School of Medicine have been encouraged by broad participation in this campaign. Support has come from Sioux Falls: Medical X-Ray Center, a local partnership, made a \$50,000 gift late in the year. Support has come from alumni across the country: Constantine Flevares, M.D., and alumnus of Warren, Ohio, made an initial gift to the Campaign in December. It, too, was \$50,000.



"We are also grateful for the smaller gifts we've received," reports Robert C. Talley, M.D., Dean of the USD School of Medicine. "Every gift to the Campaign takes us closer to the completion of the initial \$2.5 million phase."

"Every gift is an endorsement we can report to corporations and foundation and federal agencies, to which we will turn for support in 1995.

"Our work with the friends and alumni of the School of Medicine goes on. We hope people who were not able to pledge in 1994, will in 1995."

Information on the South Dakota Health Sciences Information Center—which challenges many old assumptions about libraries and librarians—can be found on the next several pages. (Print isn't entirely dead.) You will also find information on how to make your own pledge.

NOT A LIBRARY.

A GATEWAY

What is most important about the South Dakota Health Sciences Information Center does not meet the eye. Your eyes will see a new building in Sioux Falls. Inside, twenty-four PCs, two high speed fax machines and a \$70,000 CD-ROM network with dial-in access hint at the reality: this is the hub of an information network that stretches across South Dakota and around the world.

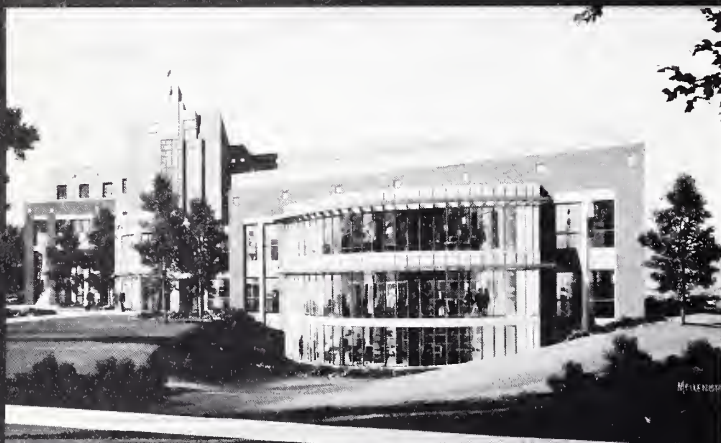
The South Dakota Health Sciences Information Center will have the largest collection of medical information technologies in the state. It will have the largest staff of medical information specialists in the state. These resources will be at the disposal of every physician in the state. And every medical library. Twenty-four hours a day.

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The information specialists in the South Dakota Health Sciences Information Center will have assigned areas of medical specialty. As important, each will be responsible for understanding the ideal technologies for selecting and distributing information. While these



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Specialists will be prepared to respond to traditional requests for traditional services – the Center will have telephone installations – they also will be able to help physicians master the new tools of the Information Age. Computer searching is becoming a valuable medical skill, and librarians are becoming teachers of that emerging science.

The South Dakota Health Sciences Information Center, our “librarians” will represent that new breed of information educator.

NOT YESTERDAY.

TOMORROW.

A physician is working entirely with electronic information. But everyone should recognize that the information systems business is now the largest in the world. Its impact on medicine will grow in time into an avalanche of change. The South Dakota Health Sciences Information Center will help South Dakota participate and take advantage of that change. A kind of new way, the Center will have a unique capacity to help lead South Dakota medicine into the 21st century, whatever shape technology takes.

The South Dakota Health Sciences Information Center represents the infrastructure of the future.

NOT OTHERS.

YOU.

Gifts have come from many alumni and friends. Leadership in the South Dakota Health Sciences Information Center Campaign has come from:

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Brief Report

An Algorithm for Evaluating Swollen Extremities in a Community Hospital — Recommendations and Results

Leonard M. Gutnik, MD and Fred C. Lovrien, MD

Evaluating swollen extremities is a common problem in general medicine. Often these patients are frustrated by multiple tests with no definite diagnosis. In an effort to simplify the diagnostic approach and avoid unnecessary testing, we devised a recommended diagnostic algorithm for primary care practitioners. (Figure 1) We reviewed the results of this approach on 36 patients using this plan.

EDEMA ALGORITHM

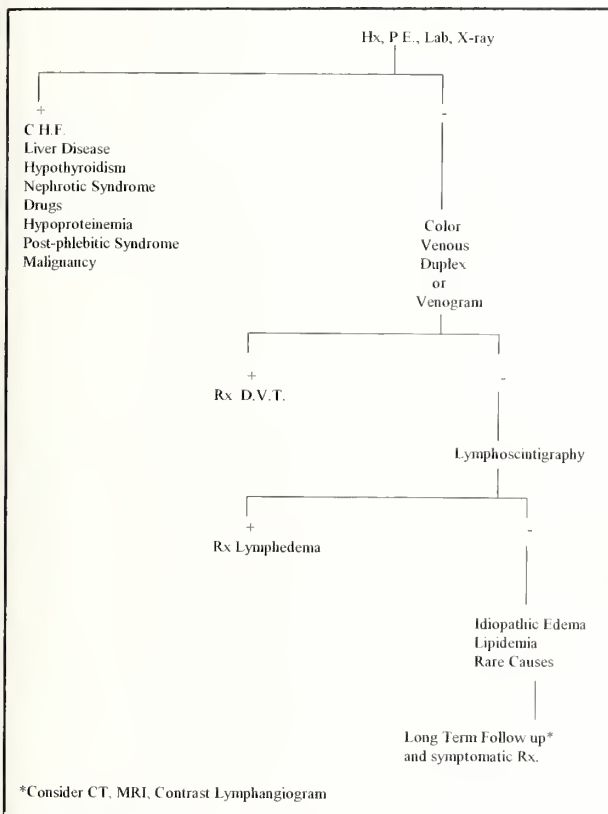


Figure 1
Edema Algorithm

Initial history, physical, lab testing and x-rays can quickly identify common causes of edema (drugs, heart failure, liver disease, hypothyroidism, nephrotic syndrome, low protein states, etc).^{1,2} If these are unremarkable, color venous doppler duplex or venography is done.³ If these confirm deep venous thrombosis, appropriate treatment is instituted. If dopplers or venography is negative, lymphatic drainage is evaluated with nuclear lymphoscintigraphy with 99mTc

antimony trisulfide colloid or filtered 99mTc sulfur colloid intradermally.⁴ If lymphedema is confirmed, appropriate therapy is instituted and etiologies of lymphedema are evaluated as necessary. If lymphoscintigraphy is negative, long term observation and more complex testing may be necessary. This group includes patients with idiopathic edema, lipidemia and early organic causes not detected on routine testing.



Figure 2

Lymphoscintigraphy Normal. Patient with swollen extremities and history of uterine cancer, status post surgery. Edema due to congestive heart failure.



Figure 3

Lymphoscintigraphy due to lymphedema. Swollen left leg in a patient with prostatic carcinoma.

We have employed this approach for several years. Recently the first year results were presented to the 14th International Congress of Lymphology. Fourteen patients with 1 or more swollen extremities were studied. Six had a history of cancer, 3 a history of extremity infection, one a history of vein stripping and

1 a pelvic fracture. Routine history, physical, labs and duplex venous dopplers were inconclusive.

Lymphoscintigraphy with ^{99m}Tc antimony trisulfide colloid was performed in upper or lower extremities, depending on location of edema. In 9 of 14 patients (64%), the lymphoscintigraphy confirmed clinical suspicion. However, in 5 of 14 (36%), an unexpected result led to a different or additional diagnosis.

In conclusion, this approach has been helpful to patients and physicians in approaching extremity edema. It provides an organized approach to a difficult problem.

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Leonard M. Gutnik, MD, specializes in internal medicine and vascular diseases, Central Plains Clinic, Sioux Falls, SD.

Fred C. Lovrien, MD, specializes in nuclear medicine and thyroidology, W. A. Boade, M.D. Ltd, Sioux Falls, SD.

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Pharmacology Focus

Vancomycin Therapy: Resistance and Appropriate Usage Guidelines

James R. Clem, Pharm.D, Sioux Falls

The discovery of penicillin over 50 years ago represented a significant advancement in the treatment of infectious disease, including streptococcal and staphylococcal infections. Within several years after the introduction of penicillin, however, penicillinase-producing staphylococcus began to develop.¹ As one would anticipate, resistance initially appeared in hospitals but rapidly spread into the community. In the late 1950's, a large outbreak of influenza was associated with an outbreak of penicillin-resistant *Staphylococcus aureus*.² Methicillin and vancomycin subsequently became available, and were effective against resistant strains. Unfortunately, methicillin-resistant strains of *Staphylococcus aureus* and *Staphylococcus epidermidis* have become more common, especially in the hospital environment.³ This leaves us with only one currently available antimicrobial to use in treatment, vancomycin.

Vancomycin-resistant enterococcus has also become a significant resistance problem worldwide. During a five year period (1989 to 1993), the percentage of nosocomial enterococcus infections that were resistant to vancomycin increased from 0.3% to 7.9%.⁴ In areas with a high incidence of resistance, treatment presents a serious challenge and treatment options are limited, typically consisting of a combination of antimicrobials or investigational agents.⁵

In addition to the obvious problems with existing vancomycin-resistant enterococcus, the potential for vancomycin-resistant *Staphylococcus* species is a serious impending issue, since currently there are no available agents to treat this infection.

Although vancomycin-resistant *Staphylococci* have not been identified yet, there is sufficient evidence that these organisms will indeed emerge as pathogens some day. In vitro, the plasmid-borne vanA gene that confers a high level of vancomycin-resistance has been shown to be transferable from enterococci to various gram-positive organisms, including *Staphylococcus aureus* and *Staphylococcus epidermidis*.^{5,6}

Because of these concerns with vancomycin-resistant organisms, the CDC's Hospital Infection Control Practices Advisory Committee held meetings with a number of national organizations to develop guidelines that deal with this imminent clinical ordeal. The recommendations that were developed were very broad in scope and included educational programs, microbiology laboratory guidelines, prevention and control of nosocomial transmission, detecting and reporting vancomycin-resistant *Staphylococcus aureus*, and prudent vancomycin use guidelines.

Since the development of vancomycin-resistance or any other antimicrobial-resistance is somewhat de-

pendent on its frequency of use, the need for usage guidelines for vancomycin are obvious. Vancomycin usage is a documented risk factor for colonization and infection with vancomycin-resistant bacteria.⁵ Due to this link between vancomycin use and resistance, the committee recommends that *all* hospitals, even those currently without vancomycin-resistance problems, develop a comprehensive plan for vancomycin use.

The guidelines for prudent vancomycin use should consider the following recommendations. Appropriate indications for using vancomycin include; (1) treatment of serious infections due to beta-lactam resistant organisms, (2) treatment of infections due to gram-positive organisms in patients with a severe beta-lactam allergy, (3) treatment of antibiotic associated colitis that is severe and life-threatening or fails to respond to metronidazole, (4) prophylaxis for endocarditis in high risk patients per American Heart Association guidelines, and (5) surgical prophylaxis involving implantation of prosthetic devices at institutions with a high rate of methicillin-resistant *Staphylococcus aureus* or *Staphylococcus epidermidis*.⁵

The use of vancomycin should be discouraged in the following situations; (1) routine surgical prophylaxis, (2) empiric therapy for a febrile neutropenic patient unless strong evidence exists for an infection due to gram-positive organisms, (3) treatment of a single positive blood culture, with others being negative, for coagulase-negative staphylococcus, (4) continued therapy in patients who are culture negative for beta-lactam-resistant gram-positive organisms, (5) prophylaxis for infection of indwelling central or peripheral catheters or vascular grafts, (6) selective gastrointestinal decontamination, (7) eradication of methicillin-resistant *Staphylococcus aureus* colonization, (8) primary treatment of antibiotic associated colitis, (9) routine prophylaxis in very low-birth-weight infants and (10) routine prophylaxis for continuous ambulatory peritoneal dialysis patients.⁵ Greater detail of these guidelines is provided in the reference listed.

Vancomycin-resistant bacteria is only one example of antimicrobial resistance and the significant therapeutic challenges that are present because of this resistance. Bacterial resistance has become a serious problem worldwide and likely will become an increasing problem in the future. A drastic endpoint with antimicrobial resistance would be a digression to the *post-antibiotic era*. Healthcare professionals need to take action so as to ensure that we will have effective antibiotic therapies in the future. A pro-active approach will likely lessen the impact of this threatening infectious disease problem.

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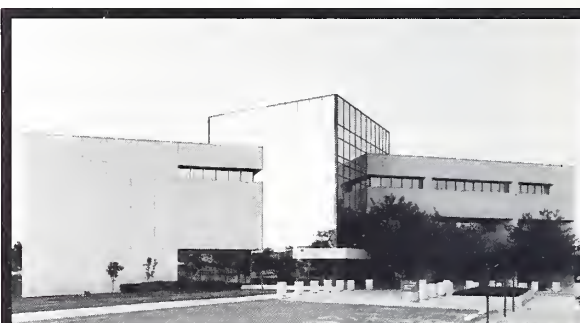
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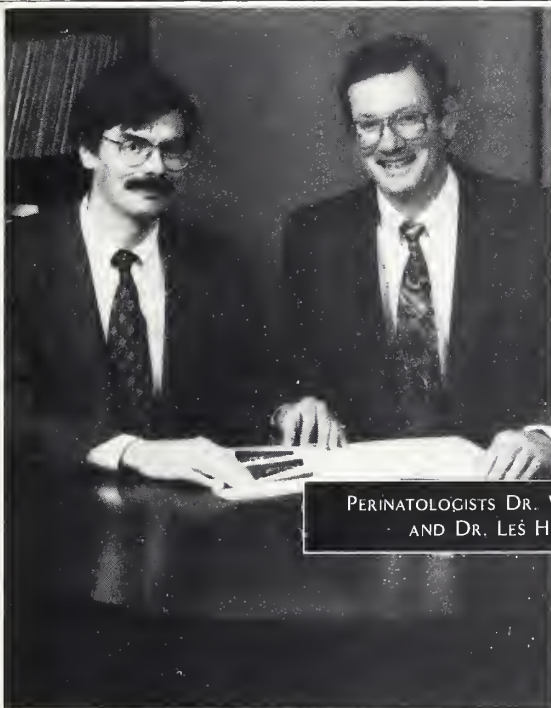
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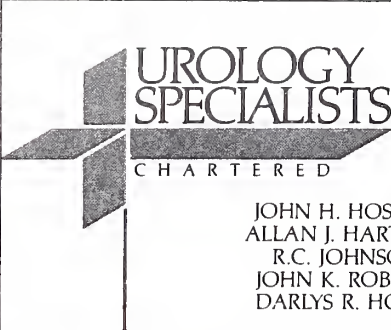
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Juergen Greineder, MD Gregory Health Care Center 400 Park Ave Gregory, SD 57533	GS/TS/VS	Tamara L. Poling, MD Rapid City Medical Center 728 Columbus Rapid City, SD 57709	D
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Alliance News



**Helen Owens, President, South Dakota
State Medical Association Alliance**

*Real joy comes not from ease or riches or from the
praise of men, but from doing something worthwhile.*
Sir Wilfred Grenfell

One of the most enjoyable aspects of being the SDSMA Alliance President has been the opportunity to meet so many of the dedicated physicians across the state of South Dakota. Some I know by reputation only, some through revelations provided by

their wives (nervous, anyone?), some by reading their Journal articles (really!), and others I have had the privilege to meet and work with personally. I have nothing but a deep respect and appreciation for the commitment of these physicians to the health and welfare of their communities. One day does not seem to be enough to honor the unselfish dedication of these men and women. Unfortunately, lately, the high calling of the medical profession, can seem more often assailed than praised.

I hope that during this month and especially on March 30th, Doctor's Day, that you will not only experience the real joy of doing something worthwhile, but the praise and appreciation as well.

Helen Owens



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MARCH 1995

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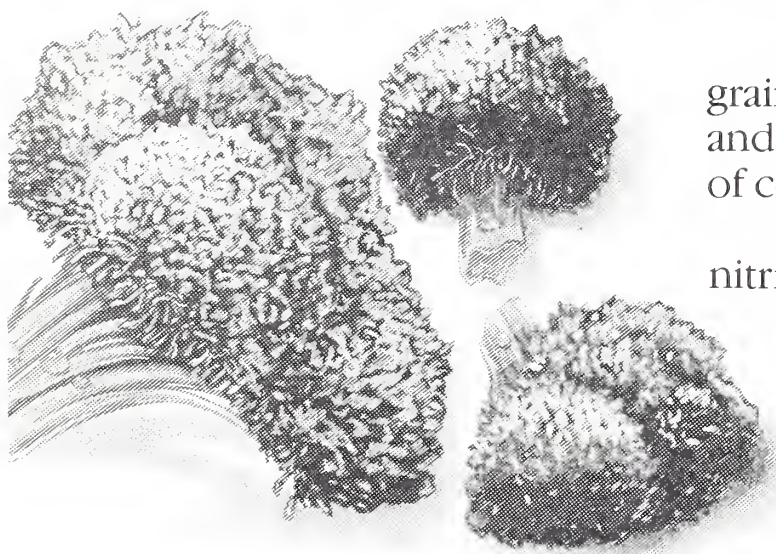
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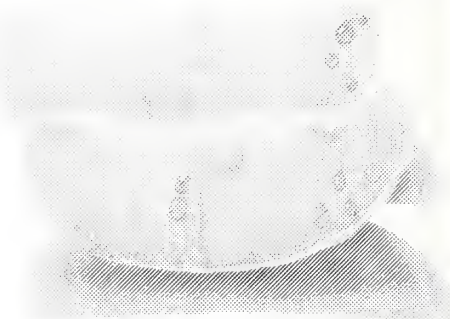
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fish and types of sausages smoked by traditional methods should be eaten in moderation.

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CME Conferences

CME Conferences being held on a regular basis at various health care facilities throughout the state of South Dakota.
(1 hour AMA Category 1 credit available unless otherwise specified)

CME CONFERENCES

MARCH 1995

- March 15 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Clinical Pathology Conference, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- March 15 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Rodney R. Parry, MD, Topic: Beyond Farmers Lung: Recognition Management of Farm Related Disorders, Info: David Rossing, MD, 331-3490.
- March 15 **Topics in Clinical Medicine - Audio Teleconference Series**; - 12:15 & 1:30 pm CT/CDT, 11:15 am & 12:30 pm MT/MDT; Speaker: Judy Magnuson, PhD; Topic: What's New in the Laboratory?; Info: Connie Kleinsasser, USDSM - 357-1480.
- March 16 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- March 16 **Neuroscience Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- March 16 **Geriatric Forum** - 7:00 am, RDT Network Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- March 16 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- March 16 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- March 17 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- March 17 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Speaker: Paul D. Frazer, MD; Topic: "PTSD: Brain Damage without a Hammer"; Info: Dougals J. Soule, PhD - 339-6785.
- March 21 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- March 22 **Forensic Pathology Seminar** - Info: Joan Cleveland, 339-1212.
- March 22 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: George Revtyak, MD; Topic: to be announced; Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- March 22 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Richard J. Barth, MD, Topic: Evaluation of the Patient with Thyromegaly, Info: David Rossing, MD, 331-3490.
- March 23 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- March 23 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: David Shields, MD; Topic: Common Occupational Dermatoses in Rural South Dakota; Info: David Rossing, MD, 331-3490.
- March 23 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- March 23 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- March 23 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- March 23 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- March 24 **Tumor Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- March 24 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145.
- March 24 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- March 27 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145
- March 29 **Topics in Clinical Medicine - Audio Teleconference Series**; - 12:15 & 1:30 pm CT/CDT, 11:15 am & 12:30 pm MT/MDT; Speaker: Anthony Salem, MD; Topic: Coagulase Negative Staphylococci: Update; Info: Connie Kleinsasser, USDSM - 357-1480.
- March 29 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- March 30 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.

March 31 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.

APRIL 1995

- April 4 **CPR Certification/Recertification** - 7-10:00 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- April 6 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: Shahbudin Rahimtoola, MD, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- April 6 **Clinical Pathology Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: to be announced, Topic: to be announced, Info: Dr's J. Ruggles & R. Thompson, 665-9002.
- April 6 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- April 6 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- April 6 **Biomedical Ethics** - East Auditorium, Rapid City Regional Hospital, Info: Medical Staff Office - 341-8705.
- April 6 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- April 6 **West River Internal Medicine Grand Rounds** - 2:00 pm, Hot Springs VA Hospital, Speaker: to be announced, Topic: to be announced, Info: Dr. Donald Humphreys - 357-1340 (Kris Karbo).
- April 7 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- April 7 **West River Internal Medicine Grand Rounds** - 11:00 am, Fort Meade VA Hospital, Speaker: to be announced, Topic: to be announced, Info: Dr. Donald Humphreys - 357-1340 (Kris Karbo).
- April 7 **Morbidity/Mortality Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- April 7 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- April 10 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145
- April 11 **Breast Cancer Conference** - 12:00 noon, Meeting Room B, Sioux Valley Hospital, Info: Dr. Thomas Cink - 333-5244.
- April 11 & 12 **ACLS Renewal** - 14.66 hours Cat 1, McKennan Hospital, Sioux Falls; Info: Kathy Miles, 339-7739.
- April 12 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: Ken Brummel-Smith, MD, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- April 12 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN - 333-1000.
- April 12 **Topics in Clinical Medicine - Audio Teleconference Series**; - 12:15 & 1:30 pm CT/CDT, 11:15 am & 12:30 pm MT/MDT; Speaker: Steven Wengel, MD; Topic: Alzheimer Disease Update; Info: Connie Kleinsasser, USDSM - 357-1480.
- April 13 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- April 13 **Cardiac Cath Conference** - 7:30 a.m., McKennan Hospital Auditorium, Info: Cardiopulmonary Dept, 339-8171.
- April 13 **Internal Medicine, Tumor Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: To be announced, Topic: To be announced, Info: Dr. J. Ruggles & Dr. R. Thompson, 665-9002.
- April 13 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- April 13 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- April 13 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- April 14 **Pathology Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- April 18 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- April 19 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Mark J. Oppenheimer, MD; Topic: Update on Lipids; Info: David Rossing, MD, 331-3490.
- April 19 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Clinical Pathology Conference; Speaker: to be announced; Topic: to be announced; Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- April 19 **Geriatric Forum** - 7:00 am, RDT Network Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- April 20 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- April 20 **Neuroscience Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- April 20 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.

- April 20 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- April 21 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- April 21 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- April 24 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145
- April 26 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- April 26 **Topics in Clinical Medicine - Audio Teleconference Series**; - 12:15 & 1:30 pm CT/CDT, 11:15 am & 12:30 pm MT/MDT; Speaker: Richard J. Gray, MD; Topic: New Guidelines on Treatment of Unstable Angina; Info: Connie Kleinsasser, USDSM - 357-1480.
- April 27 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- April 27 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- April 27 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- April 27 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- April 27 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- April 28 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145.
- April 28 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- April 28 **Tumor Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- April 28 & 29 **Advanced Life Support in Obstetrics Course** - 16 hours Cat. 1, McKennan Hospital, Info: Darcy Sherman-Justice, 339-7737.

MISCELLANEOUS

APRIL 1995

- April 5-6 **Trauma Symposium, Ramkota Inn, Sioux Falls, SD.** Sponsored by McKennan Hospital. Contact: Linda Young. Phone: 339-8531.
- April 6-9 **2nd International Conference on the Medical Aspects of Telemedicine & 2nd Annual Mayo Telemedicine Symposium,** Mayo Clinic, Rochester, MN. AMA Category 1 credit. Contact: Postgrad Courses, Sec of CME, Mayo Found, Rochester, MN 55905. Phone: (800) 323-2688.
- April 7 **ENT Update for Primary Care Physicians,** Scheffer Aud, St. Joseph's Hosp, St. Paul, MN. Fee: \$135. 6.75 hrs AAFP & AMA Category 1 credit. Contact: CME, St. Paul-Ramsey Med Ctr, 640 Jackson St, St. Paul, MN 55101. Phone: (612) 221-3992.
- April 7-8 **Central Plains Clinic's 16th Annual Symposium, Topics in Clinical Medicine,** Ramkota Inn, Sioux Falls, SD. 10.5 hrs AMA Category 1 credit. Contact: David R. Rossing, MD, Central Plains Clinic, 1100 E 21st St, Sioux Falls, SD 57105. Phone: (605) 331-3490.
- April 28-29 **Neurology and the Primary Care Physician,** Peter Kiewit Conf Ctr, Omaha, NE. AMA Category 1 credit. Contact: Sally C. O'Neill, Ph.D, Asso Dean, Creighton Univ CME Div, 601 N 30th St, Ste #2130, Omaha, NE 68131. Phone: (800) 548-2673.
- April 28-May 5 **54th Annual American Occupational Health Conference,** Sands Expo and Convention Center, Las Vegas, NV. Contact: ACOEM, 55 W Seegers Rd, Arlington Heights, IL 60005. Phone: (708) 228-6850.

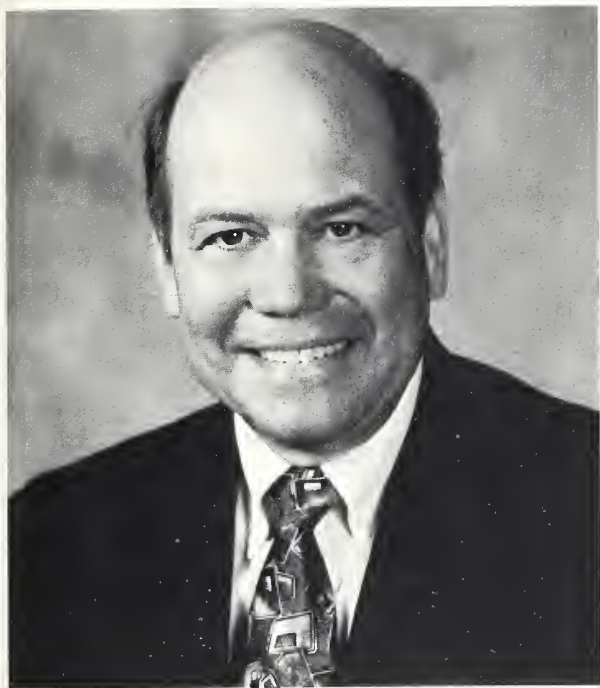
MAY 1995

- May 8-12 **16th Annual Practice of Internal Medicine,** Mayo Mcd Ctr, Rochester, MN. Fee: \$525. 31 hrs AMA Category 1 credit. Contact: Postgrad Courses, Sec of CME, Mayo Found, Rochester, MN 55905. Phone: (800) 323-2688.
- May 12-13 **2nd Annual Current Topics in Cardiothoracic Anesthesia,** St. Louis Marriott Pavilion Downtown, St. Louis, MO. 14.5 hrs AMA Category 1 credit. Contact: Off of CME, Washington Univ School of Med, Campus Box 8063, 660 S Euclid Ave, St. Louis, MO 63110-1093. Phone: (800) 325-9862.
- May 17-20 **Harnessing The Winds of Change, 18th Annual National Conf,** National Rural Health Assoc, Atlanta, GA. Contact: National Rural Health Assoc, National Serv Ctr, One West Armour Blvd, Ste #301, Kansas City, MO 64111.

JUNE 1995

- June 21-23 **18th Annual Black Hills Seminar, Advances in Clinical Pediatrics,** Rushmore Plaza Holiday Inn, Rapid City, SD. AMA Category 1 credit avail. Contact: Lawrence Wellman, MD, USD School of Medicine, 1100 S Euclid Ave, PO Box 5039, Sioux Falls, SD 57117-5039. Phone: (605) 333-7178.

President's Page



**James R. Reynolds, MD, President
South Dakota State Medical Association**

"To tax and to please, no more than to love and be wise, is not given to men."

Edmund Burke

As I write this president's page, 39 of the 40 days of the legislative session have been completed. Currently the 4% medical provider tax is scheduled for a vote of the people in a special election on July 11th. This, hopefully, will be unnecessary if the legislature will act responsibly and reach a compromise solution on the last legislative day.

The 4% provider tax has been a divisive issue for the association. As initially proposed, a 4% sales tax on medical services was opposed by some members who felt that any increase in the cost of medical services was unfair at a time when all other emphasis was on the reduction in health system costs. In addition, a number of our members initially advocated an income tax as a more equitable way of redistributing the property tax relief.

Clearly, the majority of the association objected strongly to the change from a sales tax to a provider tax. In spite of continued assurance from Governor Janklow's administration and republican leadership that the provider tax could be identified and passed on to patients, insurance companies and the Medicaid system, this was not widely accepted by our membership. The reason for this is that all reimbursement for

all medical providers is under attack and any increase that would be given would quickly be reduced by subsequent fee reductions.

Other objections have been the use of medical provider tax for property tax relief and the fact that this, in reality, will become an income tax on gross receipts of one isolated industry.

The dilemma, as I see it, is the concept of "doing one's share", which I believe all of our members are willing to do, versus a medical provider tax that ultimately drives medical costs upward for non-medical reasons. The medical provider tax again falls on the segment of society that felt the effects of cost shifting resulting from government controlled medical programs not paying their fair share in the past. Furthermore, small employers rather than large employers are more likely to see premium increases to cover the cost of this provider tax. I remain optimistic that a fair and equitable solution for property tax relief will be reached that will not be borne by a narrow segment of our citizens, but rather a broad equitable base.

As this discussion has evolved, I appreciate the input and comments from many of you as well as your willingness to discuss these issues with your legislators.

James R. Reynolds

South Dakota Foundation for Medical Care

Serving the Beneficiary Population

South Dakota Foundation for Medical Care's (SDFMC) responsibility as the physician peer review organization for South Dakota includes building a community committed to improving patient care. Through an ongoing monitoring process, SDFMC is responsible for improving quality and access to care. SDFMC also promotes informed health choices through effective communication with beneficiaries, providers, and/or practitioners.

SDFMC directs considerable effort toward working with other agencies who also share these common goals. SDFMC believes that along with the patient's physician, SDFMC is also a beneficiary advocate. Many visits are made throughout the state to inform the Medicare population about the program's goals. SDFMC also informs Medicare beneficiaries of their rights and how those rights can be exercised.

Using printed material, news media, and presentations, SDFMC has an ongoing program to aggressively pursue opportunities to meet with beneficiary groups coordinating, when possible, with other agencies that serve the beneficiary population. SDFMC provides a toll-free beneficiary hotline to address concerns of beneficiaries with respect to quality of care and utilization issues. SDFMC works with hospitals to ensure that all hospitalized Medicare beneficiaries receive a copy on the "Important Message from Medicare" which further spells out patient rights.

SDFMC is also working with South Dakota physicians in developing worthwhile consumer information directed at health promotion and disease prevention.

Please feel free to contact SDFMC with any suggestions, comments or questions as our effectiveness is dependent on approaching this together.

**Gerald E. Tracy, MD
Medical Director**

Witness and Legacy

Recently a group of us, who were visiting downtown St. Paul, chanced to wander into the imposing Landmark Center, an immense former courthouse. An exhibit entitled, "Witness and Legacy; Contemporary Art About the Holocaust", was on display, and we elected to walk through it. As the title of the exhibition suggests, the subject matter was often graphic and brutal. The prospect of seeing the exhibit generated, for me, the same type of emotional reluctance that had preceded my finally viewing the movie "Schindler's List."

Once in the gallery itself, I noted that the photographs, sculptures and paintings were often both compelling and repelling at the same time. Over one series of photographs of row upon row of dead bodies, a printed heading asked: "Who took these pictures? How can these photos exist?" One moved eerily past photographs of children lost; around a sculpture consisting of row upon row of upright shrouds; and past barbed wire encircling dark, uncertain rooms.

At some point, as I moved through these remembrances, I became aware of joyful and boisterous music and song. It was unclear from where it was emanating. Upon leaving the exhibition, I stepped out onto a second story balcony that encircled the high-ceilinged central lobby of the old courthouse. On the floor below, animated spectators were watching eight Polish men and women perform examples of their traditional dance. With gaiety and expertise, they moved in intricate circles and lines, magically drifting apart and then returning to the center to pirouette in unison with arms raised high.

I was struck that day, and still now, by the contrast posed in the museum. I had moved from the horror and brutality of the Nazi enterprise to gaze upon the innocence and joy of dance. And not just any dancers, but, coincidentally, ones of Polish descent decked out in traditional garb. Very likely, some of their direct ancestors were witnesses to, or victims of, the holocaust. These two juxtaposed experiences served as forceful reminders of the complexity of human nature, and of innate potentials for good or evil.

One of the narratives of the photographic exhibition spoke of the pain of recalling the atrocities of the holocaust, as well as, the need not to forget. Such reflections have relevance to the legacy of contemporary medicine as well. While much of illness care must focus upon suffering and fractured lives, and while the study of history can certainly ferret out rare examples of uncaring and evil physicians, there is much in medical practice about which we can be joyful and optimistic. In our traditions, and among our peers, we can readily find examples of uncompromised caring

and heroism. Again, a juxtaposition of contrast is invited—the exemplary physician versus medicine's shortcomings; or the bleakness of the holocaust versus the flourishing of the victims' descendants. Such contrasts can serve as a beacon illuminating the future. Despite the inevitable obstacles to our journey, we can see where we want to go.

Jerome W. Freeman, MD
Editor

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An Experience in Missionary Obstetrics and Gynecology

Howard T. Gilmore, MD

ABSTRACT

An extended visit at a small community hospital in Thailand provided an opportunity to observe and learn about rural health care in an emerging nation. Several aspects of gynecologic and obstetric care are compared.

Recently the opportunity to travel and to experience the practice of medicine in a missionary setting was presented to my family. Arrangements were made with a colleague who has been working in central Thailand with the Overseas Missionary Fellowship since completing his medical training in 1978. At the present time, Thailand does not permit foreign doctors to practice in the country unless they are working on a temporary visa for special projects such as leprosy rehabilitation or the AIDS project. It was, however, possible to have a short term tourist visa and to work at the Manorum Christian Hospital as a consultant in Ob/Gyn and as a surgical assistant.

The medical needs in many of the Southeast Asian countries are near a crisis level. In many respects, conditions in Cambodia, Vietnam, Laos and Burma are hardly beyond the 19th century level. There are significant improvements in Thailand because it has not been subjected to the same devastation by years of conflict that have affected its neighbors. Thailand has a democratic form of government and a traditional monarch who has a significant impact on the function of the government. One of the special concerns of the present King has been to try to improve the health status of his people. In the past forty years, tremendous strides have been made toward realizing his objectives. An outsider who has always had access to the medical care offered in the United States might be tempted to say that there are still some steps that need to be taken. There is a government supported health care system throughout the country and there are government supported medical schools training physicians to work in these hospitals. These efforts have certainly been instrumental in promoting more universal health care. However, the results of these programs have fallen far short of supplying the actual need. Therefore, private clinics and mission hospitals are necessary to supply

some of the basic needs of the people.

One of the basic beliefs of the Overseas Missionary Fellowship is that the people who work for it should have an understanding of the language and customs of the people that they are trying to help. Therefore, the first year of any mission is always spent learning the language, history and customs of the country. The need for this was apparent almost immediately. Even some of the simplest acts can be misconstrued as an insult if they are ignored or disregarded out of ignorance. It is not considered polite to wear shoes inside a room or a house, public buildings are excepted. If a foreigner chooses to disregard this custom he may be insulting the person with whom he is visiting and therefore lose all chance of having an impact on the person's medical care. It is also considered polite to bow to those you meet when you first encounter them and when you part. In the past, by disregarding these customs, well-meaning Americans visiting Thailand have earned such titles as "Ugly Americans". We are not alone in our disregard for customs. Citizens of many other countries have also disregarded local custom for a variety of reasons, mostly ignorance, and have, therefore, failed to have a positive impact with the indigenous people.

After a brief introduction to local custom, we began a two-month period of observation of the activities at a local hospital. The hospital ordinarily housed about 70 patients at one time and did offer a full range of services including labor and delivery services, general pediatric care, general surgery, general medicine and a special unit for leprosy rehabilitation. There was also an outpatient clinic attached to the hospital which served approximately 200 outpatients each day.

It was apparent from the beginning that we were working in a different environment. On the first day at the hospital, I saw two female patients who had stage IV cancer of the cervix, a diagnosis which has become

relatively uncommon in the United States. After some inquiry, it became apparent that pap smears were done very infrequently. The women were not accustomed to that type of examination. Some would have considered it an inappropriate invasion of their body and their privacy. After lengthy discussion on the subject, it was pointed out that there are statistics to show that where cervical cancer is a problem any reduction in the rate of cervical cancer will be directly proportional to the percentage of women evaluated by routine annual examination. Despite this information, there was still resistance to the implementation of a program of routine cervical evaluation. It was even more disconcerting to learn that the prenatal patients were not evaluated by pap smears either during the prenatal course or at the postpartum examination. Since most of the obstetrical care was given by a dedicated group of midwives, it was suggested that, if any real impact on the problem of cervical disease were to be made, a beginning point could be evaluation of the cervix with a pap smear at least once during the course of each pregnancy.

Another concern that was encountered in the prenatal clinic was the lack of testing for Rh factor incompatibilities. Studies have indicated that only about 2% of Thai people are Rh negative. It is, therefore, not considered important to test the patients. It could certainly be argued that this is a very important evaluation for at least 2% of the population. It could also be considered that with increased travel and a rather active tourist trade, there are more chances for miscegenation, resulting in an increased frequency of incompatibilities. Routine testing would permit the evaluation of this problem and treatment before it mushrooms into a serious problem for large numbers of innocent victims, the affected babies.

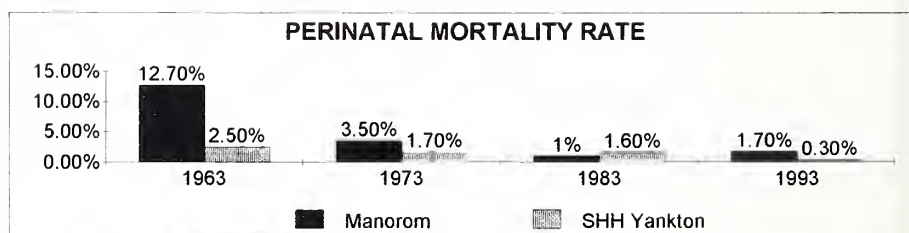
When items such as these are discussed, it is hard to generate much interest in change because of the religious background of the people. The Thai people primarily have Buddhist upbringing. It is a Buddhist belief that when bad things happen it is because the individual has run out of merit. Rarely are other factors considered. This attitude is welcome relief to the litigious environment that we face in the United States, but it creates an impediment to medical progress because there is no feeling of need to improve or modify the established practice.

The main emphasis of our experience was to evaluate and observe the obstetrical care at the hospital. Several facts were apparent from the beginning. The majority of obstetrical care was given by the nurses and midwives at the hospital. Doctors only became involved with the deliveries in special circumstances when the nurse or midwife thought there was significant trouble for the baby or the mother. The determination of need for a cesarean delivery or operative vaginal delivery was made by the nurse or midwife with sub-

sequent consultations with the physician. There were several talented surgeons at this particular hospital, but none of them had any obstetrical training. If surgery was required it was well done, but the decision to do surgery or to try some other form of assisted delivery was not always done in a timely manner.

After many hours of observation on the labor and delivery ward and by chart review, several observations were made. One of the most disturbing observations was that the method of fetal evaluation during labor was severely outdated. The vast majority of the fetal monitoring consisted of intermittent observation by listening to the fetal heart rate with a stethoscope essentially like the one developed by Laennec. Most of the fetal monitoring was done by intermittent auscultation through a wooden stethoscope. Electronic fetal monitoring was available, but was not used because of a lack of training and confidence with the advanced technology. All of the attempts that were made to encourage the use of electronic fetal monitoring were rejected with the statement that the nurses could hear what they needed to hear with the stethoscope. The tragedy of their attitude was pointed out most directly on the last day of the experience there when a chart review was requested. A patient had been admitted in labor at term. On initial examination, the fetal heart rate was evaluated by auscultation with the stethoscope and was reported to be normal. At the next evaluation one hour later, there were no fetal heart tones and further evaluation demonstrated fetal demise. While this tragedy may not have been prevented by continuous electronic fetal monitoring, some indication of impending trouble almost certainly would have been present.

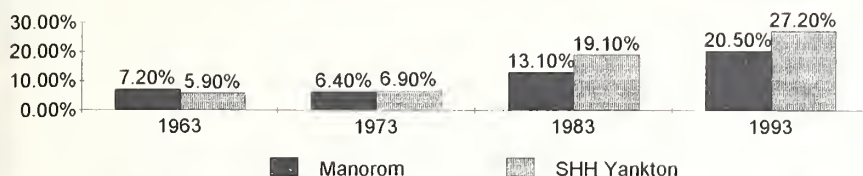
Chart reviews revealed what seemed to be an unusually high rate of stillborn infants. In 1993, there were 5 perinatal deaths in 298 deliveries for a rate of 1.7%. For comparison purposes, the perinatal death rate was evaluated for one year in each of the past four decades. In 1983, the stillborn rate was 1% with 5 of a total of 481 deliveries. In 1973, there were 22 perinatal deaths in 637 deliveries for a rate of 3.5%. In 1963, there were 38 perinatal deaths out of 237 charts reviewed for a rate of 12.7%. These rates compare to a rate of .3% (2 of 699) at Yankton's Sacred Heart Hospital during 1993.



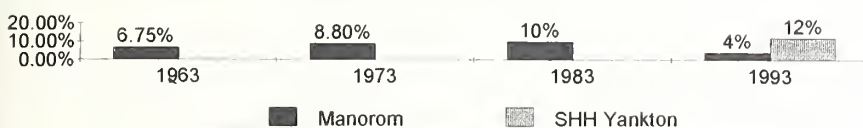
It was also noted that, as the perinatal death rate decreased from 1963 to 1993, there was a progressive increase in the cesarean delivery rate. These rates were 7.2% (17 of 237) in 1963, 6.1% (42 of 637) in 1973, 13.1% (63 of 481) in 1983, and 20.5% (61 of 298) in 1993.

It should not be implied that the increase in the cesarean rate is solely responsible for the decreasing

CESAREAN DELIVERY RATE



% TEEN AGE DELIVERIES



perinatal mortality rate, but it may have had an impact. Another factor that also had an effect on the perinatal mortality rate was the fact that more of the labors and deliveries were conducted in the hospital setting. In earlier years, many deliveries took place in the patient's home, attended by a neighbor or family member who may have had some experience with deliveries in the past. Deliveries and procedures in these settings were anything but safe or physiologic because of limited knowledge and equipment and the impossibility of appropriate hygiene or sterile technique.

A somewhat unique contributing factor to perinatal mortality and morbidity in earlier years was the custom of postpartum dehydration of the mother. It used to be the custom that the mother stayed as close to the "birth fire" as possible for a period of 14 to 21 days following the birth of the child. The purpose of the "birth fire" was to help the mother get rid of the "ill humors" associated with childbirth. As a result of such dehydration, the mother's and the infant's nutrition suffered, occasionally to a disastrous extent.

In addition to these observations, review of the delivery records indicated that there was a surprisingly high and increasing rate of operative deliveries by providers with limited obstetrical experience. The cesarean deliveries were done by qualified surgeons, but the vaginal deliveries were mostly done by midwives or nurses interested in obstetrics. A significant number of these deliveries were assisted by the use of vacuum extraction. The vacuum was applied with the metal Malmstrom extractor and there was little control of the pressure or the duration of the applied force. There may have been some alteration in the delivery rate but there was neither recognition, evaluation, nor acceptance of the potential danger of this form of delivery.

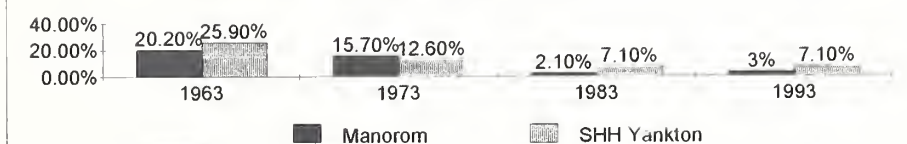
There were areas in which the Thai people seemed to be more advanced than we are. One of these areas is that of teenage pregnancy. Teenage pregnancies are much less common than expected in the U.S. The rates for the years studied were 6.75% in 1963, 8.8% in 1973,

10% in 1983 and 4% in 1993. This compares very favorably with the teen pregnancy rate of 12% at Sacred Heart Hospital in 1993.

Two mechanisms are thought to be responsible for this observation. Dating customs demand that either school children get together as a chaperoned group and interact or, if there is a date, the girl's mother accompanies the couple on the date. The other factor that impacts the pregnancy rate at all ages is the acceptance of

birth control methods. As the population of the country increased to crowded conditions, it became a concern of the King, a very influential figure in Thai culture, that contraception should be an accepted practice. It was his recommendation that families be limited to two children. This suggestion was spread throughout the country by multimedia advertisement. This recommendation certainly must have had an impact on the teen pregnancy rate, but it also had a significant impact on the number of women who were grand multiparas. The rate of grand multiparity was 20.2% in 1963 and 15.7% in 1973. After the institution of the population control program, the rate of grand multiparity decreased to 2.1% in 1983 and 3% in 1993.

GRAND MULTIPARITY



At one time, large families were desirable because of the need for more laborers. This has decreased somewhat with mechanization but, in rural Thailand, much of the work, both agricultural and industrial, is done by hand. Another reason given for having large families was that only 50% of the children survived to age 5 because of infectious diseases. This condition has improved in most areas but still affects the tribal people that live in isolated mountainous areas.

The overall experience was exciting and enlightening and it provided much food for thought about the continuing practice of obstetrics and gynecology in our culture and others.

Editorial Comment

After Dr Gilmore's article was received, I forwarded it to Father Jerome Holtzman for his review, as he has had extensive personal experience in Thailand. Fr Holtzman kindly provided the reflections that follow.

Jerome W. Freeman, MD
Editor

Father Holtzman's Comments:

I read with special interest Dr Gilmore's account of his medical experience in Thailand. Having recently spent six years in Thailand with the Maryknoll Missioners, I can appreciate his efforts and observations. My areas of contact were first on the village level in the Northeast, then in a Hmong refugee camp and finally in Bangkok. Health matters and ministry were prominent concerns in all three of these areas. The doctor is held in high esteem by the Thai people. On many occasions I was wishing I had an "MD" behind my name instead of a "Rev" in front of it. Permit me a few lay observations.

I would concur with Dr Gilmore's generally positive evaluation of the health consciousness of the Thai people. Their concern could verge on the hypochondriacal level. When they ask, "How are you?", it is with a deep concern for your personal health. The "Chinese Pharmacist" is recognized as having a cure for any ailment. Most of our prescription drugs are available "over the counter". "Karma" may account for some of the ailments, but in no way resigns them to accepting their fate without first "taking pills". It is culturally impolite to discuss anything pertaining to sex. That does explain the added obstacle to the obstetrician.

I traveled with a "Primary Health Care" unit to the villages. A major concern was educating mothers in the care of their children. The most common malady resulted from diarrhea and dehydration. The doctor would minister to over 200 patients in a matter of 2 hours. The doctors are deeply concerned about lower-

ing the infant mortality rate. From my own personal experience, I discovered the doctors were not used to prescribing dosages for a two hundred pound person, and a blood test could take up to four days.

I was very impressed with the dedication of the Medicine sans Frontiers and the Dutch medical staff at the Ban Vinai Refugee Camp. The Hmong did not respond enthusiastically to a government enforced inoculation program. They preferred the ministrations of their Shaman. Both the Hmong and the Thai see hospitalization as a family event. The whole family would stay with the patient until released.

The hospital situation in Bangkok reflects the advancements of Western education and technology. The Christian missionaries have made a great impact in this area.

The greatest current epidemic is, of course, AIDS, due to the cultural acceptability of prostitution. Again, it was the American missionaries who have raised the awareness of AIDS and have set up educational programs on all levels of society. But, so far, there is no indication of a decrease in the spread of the HIV virus.

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From a Legal Perspective

System Breakdowns: A Malpractice Trap*

MMIC Risk Management Committee

The underlying cause of many patient injuries and malpractice claims is the failure of physicians and clinic staff to implement or consistently comply with systems to follow-up on important clinical information. Medical professionals face almost certain liability if patient data that are, or should be, known to them are overlooked or "fall through the cracks" and an injury or failure to diagnose occurs as a result.

Common failures of follow-up systems seen in malpractice claims include:

FAILURE TO OBTAIN RESULTS OF DIAGNOSTIC TESTS ORDERED

Case example: The patient, a 57 year old female, was seen by her internist, Dr A, regarding a mass in her right breast. Dr A referred her to the hospital for a mammogram. Due to a clerical error, the mammogram report, indicating suspicious findings and recommending a biopsy, was sent to the wrong physician and was not received by Dr A. Dr A never followed up to determine what had happened to the report. Subsequently, the patient was seen by another physician who ordered another mammogram and a biopsy and diagnosed breast cancer.

The patient's lawsuit against Dr A alleged a failure to diagnose the cancer and resulted in a \$115,000 indemnity payment against Dr A's clinic for failure to have a follow-up mechanism in place.

Physicians are responsible for making certain they receive the results of any lab, radiology or other tests they order. They should not rely solely on their memory or those performing the tests to guarantee the return of results; too many chances exist for critical reports to be misdirected or lost in the mail.

It is recommended that clinics implement a "tickler system" or log for keeping track of tests, consultations, etc, ordered and following up to ascertain results if reports are not received in a timely fashion.

FAILURE TO BRING REPORTS TO THE ATTENTION OF THE PHYSICIAN

Case example: The patient was referred by his family physician to a urologist for a biopsy of the prostate. The pathology report showing adenocarcinoma was sent to the family physician, but was filed in the patient's chart without being seen by the physician and without any notification to the patient. Despite the patient's repeat visits to the clinic, the pathology reports were not found in the chart for more than a year. When

the diagnosis of cancer was finally made, significant metastasis had occurred. Total settlement of the failure to diagnose claim exceeded \$170,000.

A common cause of patient injuries is the filing of lab, X-ray, consultation and other reports before they have been seen by the physician. It is crucial for clinics to establish a firm policy that no incoming patient information will be filed in the chart without the initials of the physician or other authorized person verifying that it has been reviewed. Reports should never be filed without physician review on the assumption that they will be noted at the next patient visit.

A similar system for review of reports should also be in place for diagnostic testing and consultation done within the clinic. The risk of abnormal results being overlooked is high if results of tests that are completed after the patient has left the clinic are simply entered into the chart. Too often, the chart is then returned to filing without any guarantee that the results have been seen by the physician. Some clinics have found it effective to use individual reports for in-house lab, X-ray and other tests and route these reports through the physician for initialing before they are filed.

FAILURE TO NOTIFY PATIENTS OF TEST RESULTS

Case example: The patient's chest X-ray showed an area of increased density and the radiology report indicated that cancer could not be ruled out. According to the patient's family physician, this information was relayed to the patient and she was told to schedule a follow-up visit. No documentation of this call was made. The patient did not follow-up and later testified that she never really was contacted by the family physician's office so she assumed that the X-ray showed no problems. When she was diagnosed with a large cell carcinoma by another physician five months later, the patient filed a failure to diagnose claim against the family physician. The lack of documentation of the notification to the patient rendered the claim indefensible and a settlement of over \$350,000 was made.

Malpractice claims alleging a failure to diagnose may center on the allegation that the patient was not notified of critical test results. Investigation of these claims frequently reveals that, in fact, the patient was not notified because everyone involved thought that someone else should be responsible for relaying the results. This problem commonly arises when a specialist has seen the patient and has not reached a clear agreement

with the primary physician about who will follow through with the patient. In other cases, the failure to contact the patient occurs simply because the staff member to whom that responsibility has been delegated stops short of completing the task—many times because of the patient's phone was busy or there was no answer when the call was made.

Clinic policy should delineate a routine system for notifying patients of test results. If patients are usually telephoned, a back-up mechanism for notification by mail should be in place if phone contact cannot be made within a reasonable time. Patients should always be told to contact the clinic to check on test results if they have not been notified within a designated time. However, it is the physician's responsibility to ensure that test results are relayed and a patient's call to the clinic should be a back-up system, not the primary means for communicating important information.

Occasionally, physicians order lab work, X-rays, etc., but are absent from the clinic when the results are reported. In the physician's absence, the clinic should have a system in place to ensure that these reports are reviewed by another physician and the patient is notified of results in a timely manner.

Documentation of patient notification of test results is essential to counter allegations that the patient did not receive notice of significant findings. Documentation of phone calls should include the date and time of the call, the information conveyed, treatment recommendation and identification of the physician or staff member calling. If the patient is notified by letter or postcard, a copy should be retained in the chart.

FAILURE TO FOLLOW-UP ON MISSED OR CANCELED APPOINTMENTS

Case example: The patient's pap smear ordered by Dr B, her OB/GYN, indicated ovarian cancer. The patient was contacted by Dr B's office and told to come in for follow-up, but she was not told of the diagnosis or the urgency of the situation. The patient failed to show-up for two appointments yet no further contact with her was made by the clinic. When the diagnosis was eventually made by another physician, the patient sued Dr B. A significant indemnity payment was made.

Physicians often have significant information about a patient's condition and the importance of continued treatment that may not be known or fully comprehended by the patient (e.g., lab, or X-ray results). Missed and canceled appointments (post-op, follow-up and other non-routine) should be brought to the attention of the physician to determine if the patient's failure to keep the appointment creates increased risk of complication or injury and if the patient should be contacted. Any contact with the patient with regard to missed appointments should be documented in the medical record.

*Adapted from Risk Management: Meeting Your Goals, Midwest Medical Insurance Company, 1991.

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Augmentation Cystoplasty After Cesarean Hysterectomy for Placenta Previa-Percreta

Younes N. Bakri, MD; Torsten Sundin, MD, Ph.D; Mostafa Mansi, MBBCH, Ph.D; Bo Petterson, MD, Ph.D

ABSTRACT

We report a case of a 38-year old woman with placenta previa-percreta and urinary bladder invasion. Resection of the bladder wall during cesarean hysterectomy was complicated by a postoperative vesico-vaginal fistula and small-capacity bladder. A reconstructive augmentation cystoplasty utilizing the ileum was successful in improving the bladder capacity. To our knowledge, this is the first report of a placenta previa-percreta with bladder wall invasion which required reconstructive augmentation cystoplasty after cesarean hysterectomy. The obstetrician-gynecologist should be aware of reports of complications related to augmentation procedures, including late malignancy which may develop in the bowel segment used for cystoplasty.

INTRODUCTION

When the placenta infiltrates anteriorly through the myometrium and pubocervical fascia, the normal cleavage planes between the placenta and uterus and between the lower uterine segment and the bladder are obliterated. Profuse hemorrhage during attempts at removing the placenta is common and is responsible for the high maternal morbidity and mortality rates associated with this condition.¹

Vesicovaginal and vesicouterine fistulas have been described in association with placenta percreta,² however, small capacity bladder related to abnormal placental implantation is perhaps an under reported morbidity. We describe a case of placenta previa-percreta complicated by vesicovaginal fistula and small capacity bladder which was treated by fistula repair and reconstructive augmentation cystoplasty. To the authors' knowledge, this is the first report of augmentation cystoplasty after placenta previa-percreta with bladder wall invasion.

CASE REPORT

A 38-year old woman, gravida 8, para 7 with a history of 4 previous cesarean sections was first seen at 33 weeks gestation of the 8th pregnancy. Her first three pregnancies were normal vaginal births. Ultrasound examination demonstrated a complete placenta previa with a fetus of 32-33 weeks gestation. Vaginal bleeding started at 34 weeks and necessitated emergency cesarean section under general anaesthesia. Attempted removal of the placenta resulted in a partial

separation with the main portion remaining adherent to the urinary bladder wall. Digital dissection failed to identify an anatomical plane between the lower uterine segment and the urinary bladder. Massive hemorrhage ensued causing hypotension which required transfusion of 25 units of blood and blood products. Because of the continued bleeding, a hysterectomy was done with difficulty because of placental penetration of the parametrium and the urinary bladder. A portion of the bladder was resected in an attempt to remove the placenta piecemeal. Postoperative recovery was complicated by atelectasis and a vesicovaginal fistula.

Upon referral to our hospital, 11 months after cesarean hysterectomy, the patient manifested normal general physical examination. A voiding cystourethrogram (Figure 1) revealed a small capacity bladder and a reflux on the left side up to the renal pelvis. Cystoscopy confirmed the presence of a giant vesicovaginal fistula and a small capacity bladder. A decision was made to perform augmentation cystoplasty because of the limited bladder capacity.

At operation the bladder was found to be very small with pronounced perivesical fibrosis. There was a vesicovaginal fistula in close connection with the ureteric orifices. A 40 cm long loop of the ileum was isolated, split along its antimesenteric border and arranged as a patch with the shape of a W. After reimplantation of the ureters into this patch its lateral sides were sutured together to form a pouch. The bladder was resected below the fistula and the remaining small bladder part close to the urethra was connected to the ileal pouch.



Figure 1

Voiding cysto-urethrogram. Contrast infused through a cath in the bladder. From the left portion of the bladder base immediate filling of the vagina is seen. The urinary bladder seems quite small. Marked reflux on the left side up to the renal pelvis.

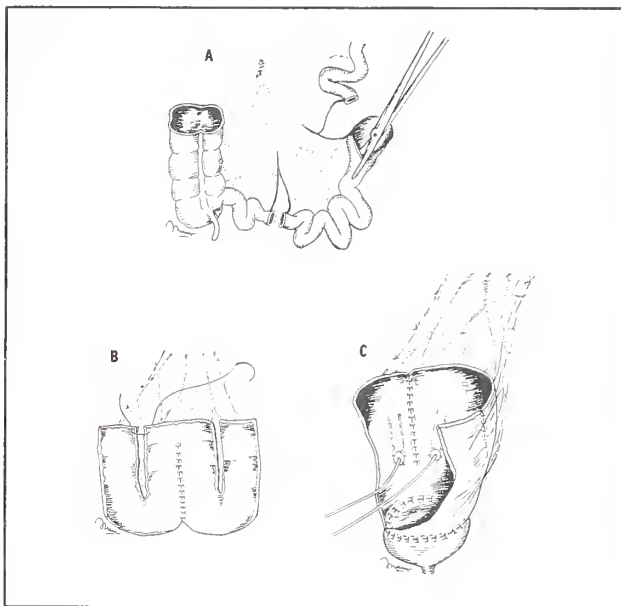


Figure 2 A,B,C

Schematic drawing of the augmentation procedure.

(Figure 2 A,B,C)

The patient is currently asymptomatic 24 months after the procedure.

DISCUSSION

Placenta previa-percreta with bladder involvement is a rare condition; only 25 cases have been reported in the English language literature.³⁻¹⁰ Perusal of these reports is remarkable for the consistent finding of profuse hemorrhage upon attempts at placental removal. Estimated blood loss ranges from 6.5 - 20 liters, highlighting the morbidity of having the placenta infiltrate through the myometrium and pubocervical fascia,¹¹ thus making separation of the bladder from the lower uterine segment virtually impossible. In this situation hysterectomy can be performed using the "posterior approach". The uterus is mobilized by dividing the uterosacral ligaments and entering the vagina posteriorly. The ureters are then retracted laterally while the uterus is retracted medially, allowing the uterine vessels and parametria medial to the ureters to be ligated sequentially from proximal to distal. In this fashion, the uterus is mobilized until the only remaining attachment is where the placenta percreta has invaded the bladder.¹⁰ However, despite careful surgical dissection, postoperative complications are common including fistula formation, ureteral stricture, urinary stasis, infection, stone formation, renal compromise, and pelvic and renal abscess formation.¹⁰⁻¹³

Bladder augmentation is an accepted method to treat the small contracted bladder caused by tuberculosis, radiation, chemical agents and chronic unspecific inflammation.¹⁴ Usually after partial cystectomy the bladder will enlarge to a sufficient capacity within a few months. In our case the existence of a vesicovaginal fistula and pronounced perivesical inflammation were the likely causes for bladder contraction.

Recently, neurogenic bladder disturbances seem to have become the most common indication for augmentation procedures.¹⁵ Thus, patients with hyperreflexic and hypocompliant bladders may be improved in cases where conservative methods have failed.¹⁶ It should be explained to the patients preoperatively that they may develop urinary retention. However, in many cases intermittent self catheterization is much better tolerated than the preoperative status of extreme frequency, urgency and often incontinence. Furthermore, the low pressure large capacity reservoir will protect the upper urinary tracts.

Intact intestinal loops, whether derived from small or large bowel, produce high pressure peristaltic contractions if used as a bladder substitute.¹⁷ Detubularization, i.e. folding of the split intestine into a more spherical form, was demonstrated to be an effective way to create a low pressure reservoir after bladder substitution or augmentation.¹⁷

In hyperreflexic bladders with good capacity, resection of the detrusor is not necessary. In these cases bivalving of the bladder either in the sagittal or coronal

plane and interposing an open patch of an intestinal loop ("clam cystoplasty") may be sufficient.¹⁶

Mucosal changes are known to occur after long term exposure to urine, more pronounced in ileal than colonic segments with atrophy and loss of villi.¹⁸ Perforation resulting in urinary peritonitis is a rare but potentially life-threatening complication of enterocystoplasty.¹⁹ Late tumor formation has until now been documented in 14 cases after bladder augmentation procedures (11 ileocystoplasties and 3 colocolocystoplasties).²⁰ Therefore, lifelong follow-up with yearly cystoscopies and possible biopsies is necessary, starting about 5 years after the procedure. Uremia is a contraindication since intestinal mucosa has a potential for significant reabsorption of urine constituents which the kidneys have to compensate for.

In conclusion, augmentation cystoplasty is a very useful procedure with documented good long term results²¹ provided it is used in properly selected patients with understanding of techniques and complications.

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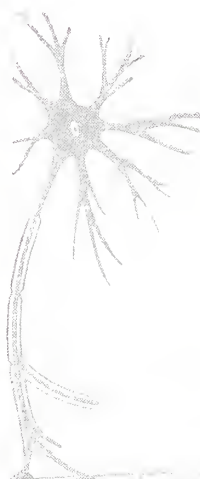
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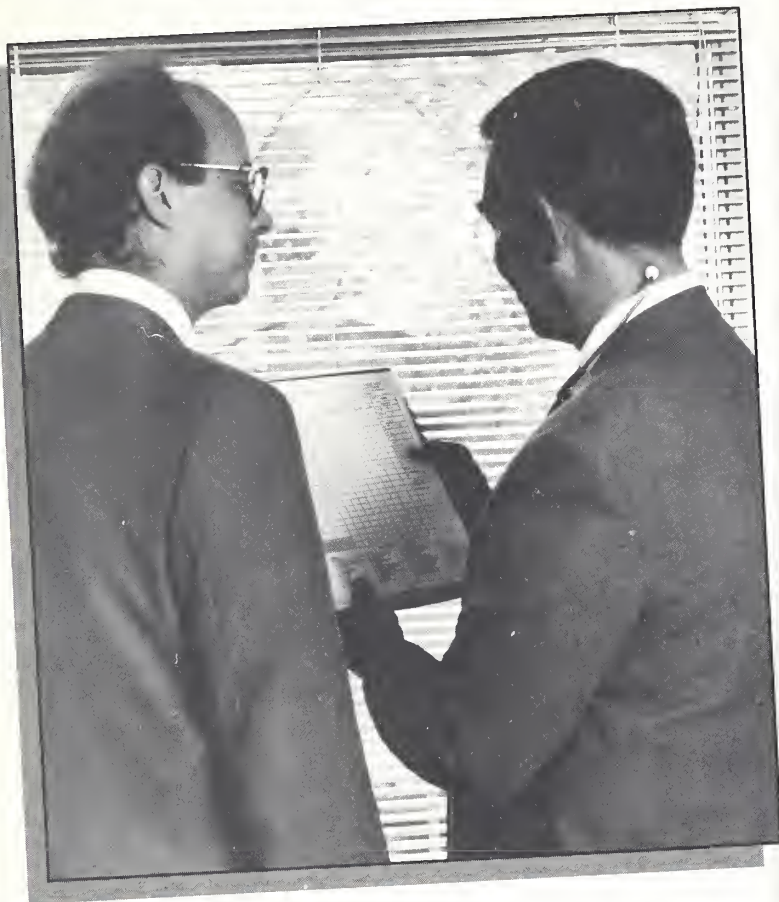
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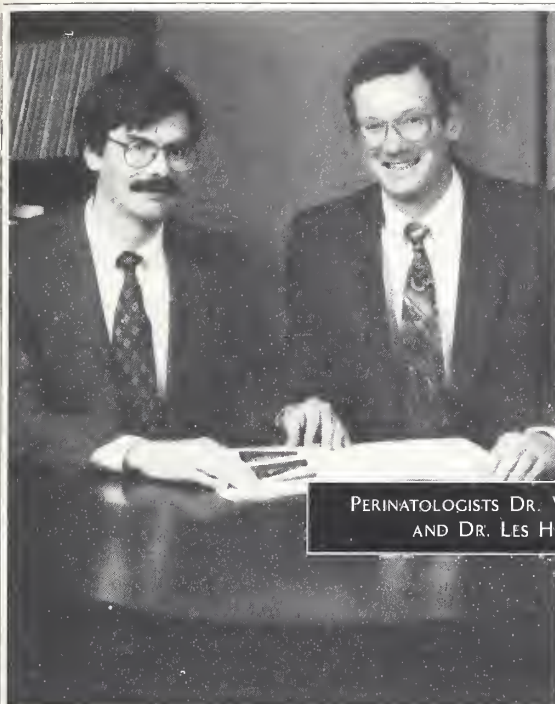
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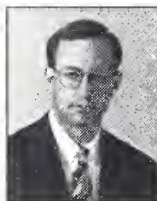
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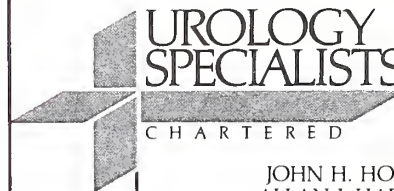
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The Geriatric Health Care System—A Consumer's Viewpoint*

Didi Castle Thompson

Ladies and gentlemen, I'm delighted to be here. You have no idea how nice it is to discover that those who deal with the elderly on a daily basis actually consider walking around the block to spend their leisure time looking for another one.

My children may be right: they insist that listening to a geriatric health consumer in relatively good condition will be such a novel experience that you're bound to enjoy it. My son-in-law, Greg Balko, who has his boards in both forensic and neuropathology, thought it would be hilarious to start this chat with three or four slides of anything at all, accompanied by serious commentary delivered in the most complicated medical terms available; which he would be happy to supply of course. A smashing idea with only one flaw. I am not Carol Burnett.

What is worse is that I've no idea what a health care system is and am amused and amazed at being classified as "geriatric" when, in another couple of weeks, I'll only be 77. And being a health care "consumer" sounds like I'm having it for breakfast. How the vocabulary of medicine has changed!

Which brings us to the point of this whole thing. How do consumers react to the system? How **would** older patients like to be treated by their doctors? How **can** doctors improve treatment of the elderly, according to this consumer's point of view?

Somehow this reminds me of the years we were involved with horses. I took a filly to a well-known horse trainer. When it was time to pick her up, I asked him anxiously, "Are there any special things I should do?"

Silence. Then, "Just treat her like a horse," he said.

Just treat a geriatric patient like a fellow human being and you can't go wrong.

In preparing for this evening's talk, I asked several old friends in and out of the medical profession if they could contribute some helpful hints, humorous if possible, on the subject of geriatric health care. They all came through, bless their hearts, and I now have a collection of geriatric jokes suitable only for the men's locker room. Too late, I realized I'd only asked for quotes from men. This is inexcusable. My apologies to every woman in the room.

My dentist, Dr Jensen, whom I see briefly every six months—thank God I still have my own teeth—suggested, if I wanted to be **very** daring, I might quote a local joke.

Naples is known as the age capital of the world.

It also ranks highest in the nation for AIDS—bandaids, Roloids and hearing aids.

A nice little joke, but—daring? Sometimes projecting an image of a sweet, little old lady with nothing on her mind but a gaggle of gorgeous grandchildren works to her advantage. If one can squeeze out an extra drop of TLC (tender loving care) from one's overworked physician by appearing frail and fuzzy, why not?

But, please, never underestimate the intelligence of most of us who line the walls of your waiting rooms. My internist, Dr Williams, whose waiting room looks like a way station for those of us enroute to the Pearly Gates, was obviously shaken when asked for a quote—the little, old lady syndrome rides again.

"Why", he asked, was I invited to speak at a medical conference?

The implication was clear—why not an eminent MD instead of a rank amateur whose knowledge of medicine barely covers the head of a pin? "Well", I said, "I really don't know—must be those columns I write in the Rapid City Journal telling it like it is to grow old. And while I lack the MD degree needed to play God, some of my best friends are doctors—and I'm overqualified as an expert on aging."

With that, Dr Williams disappeared and returned with the following secrets of success when treating the elderly. He attributes the original to Charles Mayo, who suggests that such specialists should: "Speak softly, so they appear kind; be bald, so they look experienced; and have hemorrhoids, so they look concerned."

Many of us develop indigestion whenever we hear phrases such as "golden years", "70 years **young**" or "earned every wrinkle". And remember that awful ad, "You're not getting older, you're getting better"? Embarrassing. On a par with that non-liberating cigarette ad, "you've come a long way, baby".

So, when we come to see you, don't patronize us, please. Wrinkles are not synonyms for senility. We're there because we need you. The old depression-era song comes to mind—"Brother, can you spare a dime?" Doctor, can you spare some time? I know many of you do, but overall, something called the health care system has replaced the doctor-patient relationship and become a consumer assembly line.

A talk presented to the Sixth Annual Update in Clinical Practice Conference, sponsored by the University of South Dakota School of Medicine Department of Internal Medicine and Rapid City Regional Hospital, Rapid City, SD, January 12, 1995.

What's strange about this is that patients, who may get a two-minute glimpse of you after all the technicians are through, still think of you as "theirs". My doctor. My nurse. My internist. My dermatologist. Mine. Mine. Mine.

In essence, you become member of their families. That this is a one-way street doesn't matter. They need to believe you can tell them what ails them and that you, as surrogate parents, care. (A bit of home-brew psychiatry here, but nonetheless true from the viewpoint of a geriatric health care consumer, which is what this is all about).

A sneaky way to bring in the psychoanalytic connection, don't you think? I must tell you that not only was I the wife of a psychiatrist for 47 years, I spent five of those years in analysis with Heinz Kohut, who remained a friend until his death in 1981. As some of you may know, Kohut's book, "The Analysis of the Self", created a flap in psychiatric circles around the world.

Speaking personally, analysis was the greatest learning experience of my life. Since I look upon life itself as a course in continuing education, analysis was my PhD.

As you listen and look at someone in the prime of old age—a shake here, a quiver there—it may be a surprise to hear how much research is involved in writing a column aimed toward readers 55 and over. Believe me, appearance can be deceiving.

Not long ago, two back-to-back columns covered a fascinating book titled "How Psychiatrists Look at Aging", (Volume II, incidentally). I ordered it from International Universities Press because two of its contributors, Roy Whitman and Knight Aldrich, are old friends. I couldn't put it down. No one with a smidgen of curiosity about what makes people tick, could. Eighteen analysts try to give us their thoughts on a subject most would rather ignore. Not surprisingly, denial runs rampant, mostly on the conscious level, of course, but in rare instances, shoved right off the page.

"When people find out I'm a physician", Samuel Eisenstein writes, "I am often asked, 'Are you still practicing?' This has happened so frequently to me that I conclude that old age is often imposed on us whether we experience it or not."

Bingo. Every year since reaching my seventieth, long distance friends ask, usually on Christmas cards, "Are you still writing?" I'm with Bernard Shaw on this one. He is reported to have said, "If I stop writing, I must die for want of something to do." He died at 94.

Louis A. Gottschalk confesses, "Inside my skin, my perceptions and thinking and feeling are typical of myself in the early twenties of my life, even though I am 77." This is the concept it's impossible for the young to understand. How can they? They've never been there. What's more, in their hearts, they're convinced that when they do get old, they're never going to look like THAT.

Of all the contributors to this book, the Greek, Peter Hartocollis, appeals to me most. He must have been hell to live with, but how can one resist a man who titles

his article, "My Mother's Last Smile"? He agrees that, "Age is a reality imposed upon us by those around us...[that] age is a very relative, elusive, personal matter...[and that] objectively speaking, age is something physical, biological in essence and physical in appearance...but for the person concerned, age is mainly psychological: I am as old as I feel."

But it's his last paragraphs that get to me. Prefaced by the growing awareness of death that comes with old age, Hartocollis sums up his own feelings.

"In fact, I have the feeling that I've started dying. As I am more aware of aging, I have the feeling that part of me has somehow died. For example: I rarely have erotic dreams any longer. Yet, I am still daydreaming about falling in love."

I haven't written my novel yet. I decided to wait until I write a psychiatric textbook first - in Greek, of course. I could have started writing my novel instead. But I need to wait some more. It gives me something to hope. If I write it, something more of me will have died. I am afraid I can say the same about the wish to fall in love once more in my life. But it would be worse if the wish died before me."

I love this man. Which is perfectly all right since I don't know him. But he's a romantic and so am I. I doubt if either would have it any other way.

Now about those Golden Years. Three little words tell us all we need to be to enjoy them: health, wealthy and wise.

Since opinions differ on how much is enough and we have no control over the eventual deterioration of aging bodies nor the increasing dependency and loss of autonomy we fear far more than death itself—it seems to me that, as long as the mind remains intact, the focus should be on learning to be dependent without losing our sense of self. And to look forward, rather than back.

Dr Alex Kaplan tells us, "I can now accept the fact that the past is past and while I cannot experience my own death, I know death is inevitable. I still have goals and projects to accomplish. They are not as **urgent** as they were in the past, but without them I would certainly be depressed."

Without goals and projects, everyone would be depressed. If the goal is only to stay out of a hospital if it kills you, it's a goal. There's a pervasive feeling among the old that hospitalization may be the end of the line. If their intellect is still functioning, they **know** nursing homes are.

There's no doubt about it. Aging is not for the fainthearted. The next time one of us totters through your door, think of us as battle-scarred veterans fighting our last war. Next stop, Valhalla.

I've long suspected that my wish to be cremated stems from childhood memories of glamorized tales of Vikings setting forth on their last sea-going adventures aboard flaming Viking funeral barges. Years later,

when on assignment in Scandinavia for a Canadian travel magazine, it was lovely to find reality and fantasy walking together arm in arm.

I haven't said much about the most interesting man I ever knew, my husband. Partly because I'm afraid once I get started I won't know when to stop, and partly because the years since he died so suddenly seem only seconds ago. As someone said, "Let nobody lead you to believe otherwise, when you part with a mate of a lifetime, the heart falls in with a grief that knows no bounds and can't be communicated. The song is ended, but the melody lingers on. The melody is the impact of his personality on his wife, children and everyone who knew him, which remains as vibrant and alive as ever today. It's odd. Almost nine years after his death, I'm still strongly motivated not to let him down. He was fun, funny, exasperating, brilliant, multi-talented, hard to live with, loved his work, loved his family and was never, ever dull.

Having watched widows idealize their husbands far beyond the bounds of reality, I was determined not to do the same. Marriages are not made in heaven. They are made on earth. But is it my fault if I think the smartest thing I ever did was to marry Jamie? And is it my fault I turned out to be right?

I look at couples our age and older — Jamie would be 78 today — and I wonder if they know how lucky they are to grow old together. I like to think they do.

On those marvelous days when age goes into remission and you feel younger than springtime and there's a big, beautiful world out there just waiting for you to explore; on those days, you know you've done your best with what you had to work with and it turned out a whale of an adventure after all.

Health care system is modern verbiage for a concept as old as time — people helping people. In the process of easing the physical or psychological pain of others, we help ourselves. The circle is complete. Isn't this really what medicine is all about? As for the system, whatever it is, you are far more qualified to critique its efficiency than I am. I can tell you that elderly victims of overscheduling can wait 45 minutes, even an hour, in your outer office where the action is, but develop the screaming meemies if they have to wait another 20 minutes in one of those awful cells. If the patient needs a stress test this is the best there is.

Until two years ago, I hadn't been a hospital patient for 43 years, when I had my last baby. An emergency operation for a brachial artery aneurysm was the cause. The surgeon did a beautiful job. I owe him a debt of gratitude, not to mention an arm. I also owed over \$12,000. Three days in a hospital adds up to \$12,000? With separate bills from everyone including whoever emptied the wastebasket? This is overkill. Is there anything health care providers can do about this? I hope so. There are a lot of good people out there who can't afford to stay alive.

Being old in a youth-oriented society is a no-no. It's hard to tell us apart, they say. We all look the same.

Two British sit-coms are right on target, "Waiting for God" and, to a lesser degree, "One Foot in the Grave". Both have the geriatric crowd in stitches. We are having a healthy laugh at ourselves.

And, okay, so gravity gets you in the end. But look at it this way — if everything went up instead of down, would we look better — or worse?

Finally, a thought to frame and hang in your office (and mine). It comes from a play by William Butler Yeats.

"The dream, though old, is *never* old...Did you see an old woman going down the path: I did not...But I saw a young girl and she had the walk of a queen."

AUTHOR

Didi Castle Thompson, Naples, Florida, is a free-lance writer. Her columns appear in the Rapid City Journal, Rapid City, SD.

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Helen Owens, President, South Dakota State Medical Association Alliance

1-800-430-SAFE

On March 22, 1995, the South Dakota State Medical Association Alliance held news conferences in Sioux Falls and Rapid City. We announced the establishment of a statewide 1-800 number that victims or potential victims of family violence can call to be referred to a safe house or shelter where they can obtain assistance. This exciting development, made in cooperation with other statewide groups, is the first step in our campaign against family violence.

Soon the South Dakota State Medical Association and Alliance will begin work on the final elements of a multi-media statewide campaign to be kicked off at the annual Medical Association meeting in June. The theme of this campaign will be - **FAMILY VIOLENCE: FACE THE PROBLEM**. It will encourage people to recognize and take action against family violence. The newly established 1-800 number will be displayed on posters distributed to schools, churches and businesses throughout South Dakota. It will also be broadcast via public service announcements on television and radio.

The consequences of family violence touch every medical practice and community in our state. The



Medical Association and the Alliance are asking for the support of all physicians and their spouses to make this public service campaign a reality. Shortly, you will be receiving a letter asking for a financial contribution to the family violence campaign. Please respond generously. Together we can make a difference!

THANK YOU SOUTH DAKOTA DOCTORS!!

To show our appreciation for the medical care you've shown the people of South Dakota, the following Alliance members and clinics have contributed to the AMA-ERF Foundation in celebration of Doctor's Day, March 30, 1995.



Physician(s) Honored

Honored By

Keith Hurst, MD
 Bob Quinn, MD
 Joe Chang, MD
 Richard S. Hieb, MD
 Thomas C. Johnson, MD
 J. Geoffrey Slingsby, MD
 Gerald R. Herrin, MD
 Michael C. Rost, MD
 M. G. Mutch, Jr, MD
 Will Hurley, MD
 Lawrence W. Finney, MD
 Roy Knowles, MD
 Calvin S. Schad, DO
 Kirke H. Wheeler, MD
 Valdis A. Dzintars, MD
 John J. Herlihy, MD
 James A. Engelbrecht, MD
 Charlie Hanson, MD
 Jeff Bendt, MD
 Allen Nord, MD
 William Hanson, MD
 Jeff Hanson, MD
 John Barlow, MD
 Harland T. Hermann, Sr, MD
 Alan R. Bloom, MD
 Jean L. Gerber, MD
 Winston Odland, MD
 Karl H. Kosse, MD
 Juan Chavier, MD
 James I. Hovland, MD
 Michael P. Hovland, MD
 Robert McGee, MD (deceased)
 Rodney R. Parry
 Steve Schroeder, MD
 Kathy Wimmers, MD
 Joel Huber, MD
 Jim Ryan, MD
 Michael Pekas, MD
 Russell T. Orr, MD
 Dorence Ensberg, MD
 Les N. Heddleston, MD
 Robert Van Demark, Sr, MD
 William O. Rossing, MD
 John Ochsner, MD

Vashti Apostol Hurst
 Ruth Quinn
 Karen Chang
 Brenda F. Hieb
 Brenda K. Johnson
 Jacalyn T. Slingsby
 Eileen Gavin Herrin
 Judith F. Rost
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 Joan Hurley
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 Carmen Chavier
 Marie T. Hovland
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 Bertie Van Demark
 Ihlene Rossing
 Mary Ochsner

Michael Fiegen, MD
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 Courtney W. Anderson, MD
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 James R. Reynolds, MD
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 Charles W. Shafer, MD
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Jacqueline Shaskey
 Suzanne Volin
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Executive Proclamation

State of South Dakota

Office Of The Governor

WHEREAS, South Dakota was founded with hard work, perseverance, dedication to duty and concern for one's fellow man, and,

WHEREAS, Individuals in the medical profession across the state have devoted their lives to the betterment of their communities, to caring and sharing with family and friends, and a day-to-day giving which makes South Dakota a great state in which to live and work; and,

WHEREAS, South Dakota doctors, through their services, have helped ensure quality health care for the people of South Dakota, and,

WHEREAS, It is fitting and proper as Governor to join in bringing special recognition to this outstanding group of South Dakotans:

NOW, THEREFORE, I, WILLIAM J. JANKLOW, Governor of the state of South Dakota, do hereby proclaim March 30, 1995 as

DOCTORS DAY

in South Dakota, and I encourage the citizens of the state to join me in thanking these individuals for their unselfish dedication to others.



IN WITNESS WHEREOF, I have hereunto set my hand and caused to be affixed the Great Seal of the State of South Dakota, in Pierre, the Capital City, this Second Day of March, in the Year of Our Lord, Nineteen Hundred and Ninety-Five.

William J. Janklow
 WILLIAM J. JANKLOW, GOVERNOR

ATTEST.

Joyce Hazeltine
 JOYCE HAZELTINE, SECRETARY OF STATE

Acetaminophen - Old Drug, New Questions

James E. Powers, Pharm.D, Brookings, SD

The idea that drugs will do only what their creators want them to do is pure science fiction.
- John Brunner, 1994

The recent death of a Dakota University student from an overdose of acetaminophen taken with therapeutic intent and the December 21, 1994 article in JAMA¹ discussing the association of acetaminophen hepatotoxicity with fasting and ethanol use is a strong reminder that acetaminophen, one of the safest and widely used pain medications, is not a benign drug.

Acetaminophen, an active metabolite of both acetanilid and phenacetin (remember ACP's), gained in popularity in the late 1940's and has been available in the United States without prescription status since 1955. An analgesic and antipyretic similar to aspirin and other NSAID's, it does not cause GI erosion and bleeding associated with aspirin and has no effect on platelet function. Acetaminophen inhibits brain prostaglandin synthetase but has very little activity as an inhibitor of the peripheral enzyme thus explaining the weak anti-inflammatory action of acetaminophen.

Rapidly absorbed from the GI tract acetaminophen is extensively metabolized in the liver to inactive conjugates of glucuronic and sulfuric acids and to a hepatotoxic intermediate metabolite by the cytochrome P450 mixed-function oxidase system. The intermediate metabolite is detoxified by glutathione. Serum concentrations of 10-20 mg/L are needed for analgesic and antipyretic activity. The half-life of acetaminophen is about 2 hours but is decreased in hyperthyroidism and pregnancy, and increased in hepatitis and neonates.

Adverse reactions are rare when acetaminophen is appropriately dosed but with overdose, hepatotoxicity becomes a real danger. The maximum dose of acetaminophen should not exceed 4 g in a 24 hour period. Acetaminophen hepatotoxicity after a dose of 4 to 10 g/d was associated with fasting and less commonly with alcohol use. Patients who developed hepatotoxicity after taking acetaminophen doses of greater than 10 g/d for therapeutic purposes were alcohol users. Acetaminophen overdose appears to be enhanced by fasting in addition to alcohol ingestion.¹

A recent review indicated that at least 640 non-prescription and prescription products contained acetaminophen! One could envision a scenario of a patient with the "flu" not eating and taking several Tylenol Extra Strength tablets daily (500 mg acetaminophen per tablet), a few Ornex Severe Cold caplets (500 mg acetaminophen per caplet), and a shot or two of NyQuil Adult Nighttime Cold/Flu Medicine

(1000 mg acetaminophen per 30 ml), with the results not relief but hepatotoxicity.

In perspective, acetaminophen remains a low risk drug but with several caveats.

1. Patients should not take more than 4 g of acetaminophen in a 24 hour period.
2. Start with minimum acetaminophen doses and use no longer then necessary.
3. Keep a vigilant watch over your nursing home patients. Many have PRN's for acetaminophen and other analgesics containing acetaminophen such as propoxyphene/acetaminophen combinations. There is the danger these could be used concurrently.
4. The patient's drug history should contain over-the-counter drugs. Call the patient's pharmacist; they can be a great help with both prescription and OTC history.
5. Be watchful of alcohol abusers or fasting patients, especially during cold and "flu" periods.

REFERENCE

1. Whitcomb DC, Block GD: Association of acetaminophen hepatotoxicity with fasting and ethanol use. JAMA 1994;272:1845-1860.



SDSU

Edited by Brian Kaatz, Pharm.D.



SDSU

Directory of this Month's Advertisers

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THE SOUTH DAKOTA JOURNAL OF MEDICINE thanks these companies for advertising in this Journal.

CME Conferences

CME Conferences being held on a regular basis at various health care facilities throughout the state of South Dakota.
(1 hour AMA Category 1 credit available unless otherwise specified)

CME CONFERENCES

APRIL 1995

- April 11 **Cardiology Update Series** - 12:15 pm, Stukel's Restaurant, Gregory, SD, Info: Dr. Kevin Vaska - 357-1340.
- April 18 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- April 19 **Geriatric Forum** - 7:00 am, RDT Network Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- April 19 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Brian T. Hurley - 357-1340 (Barbara).
- April 19 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Info: David Rossing, MD, 331-3490.
- April 20 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- April 20 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- April 20 **Neuroscience Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- April 20 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- April 21 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- April 21 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- April 24 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145
- April 26 **Topics in Clinical Medicine - Audio Teleconference Series**; - 12:15 & 1:30 pm CT/CDT, 11:15 am & 12:30 pm MT/MDT; Info: Connie Kleinsasser, USDSM - 357-1480.
- April 26 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Brian T. Hurley - 357-1340 (Barbara).
- April 27 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- April 27 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- April 27 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- April 27 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- April 27 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- April 28 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- April 28 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145.
- April 28 & 29 **Advanced Life Support in Obstetrics Course** - - 16 hours Cat. 1, McKennan Hospital, Info: Darcy Sherman-Justice, 339-7737.
- April 28 **Tumor Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.

MAY 1995

- May 2 **ACLS Renewal Course**, - 8.25 hours, Cat. 1, McKennan Hospital, Info: K. Miles, 339-8096.
- May 3 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: William Lockwood, MD, Topic: Bloodborne Pathogens, Info: David Rossing, MD, 331-3490.
- May 3 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Info: Dr. Brian T. Hurley - 357-1340 (Barbara).
- May 4 **Clinical Pathology Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Info: Dr's J. Ruggles & R. Thompson, 665-9002.
- May 4 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- May 4 **Biomedical Ethics** - East Auditorium, Rapid City Regional Hospital, Info: Medical Staff Office - 341-8705.

- May 4 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- May 4 **West River Internal Medicine Grand Rounds** - 2:00 pm, Hot Springs VA Hospital, Info: Dr. Kevin Vaska - 357-1340 (Kris Karbo).
- May 4 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- May 5 **West River Internal Medicine Grand Rounds** - 11:00 am, Fort Meade VA Hospital, Info: Dr. Kevin Vaska - 357-1340 (Kris Karbo).
- May 5 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- May 5 **Morbidity/Mortality Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- May 5 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- May 8 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145
- May 9 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: William Lockwood, MD; Topic: Bloodborne Pathogens; Info: David Rossing, MD, 331-3490.
- May 9 **CPR Certification/Recertification** - 7-10:00 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- May 9 **Breast Cancer Conference** - 12:00 noon, Meeting Room B, Sioux Valley Hospital, Info: Dr. Thomas Cink - 333-5244.
- May 10 **Dermatology Conference** - 7:30 am, Laboratory of Clinical Medicine, Sioux Falls, Info: Dana - 339-6537.
- May 10 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Sioux Falls, Info: Brian Hurley, MD - 357-1340 (Barb).
- May 10 **Topics in Clinical Medicine - Audio Teleconference Series**; - 12:15 & 1:30 pm CT/CDT, 11:15 am & 12:30 pm MT/MDT; Info: Connie Kleinsasser, USDSM - 357-1480.
- May 10 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- May 11 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- May 11 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- May 11 **Cardiac Cath Conference** - 7:30 a.m., McKennan Hospital Auditorium, Info: Cardiopulmonary Dept, 339-8171.
- May 11 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- May 11 **Internal Medicine, Tumor Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Info: Dr. J. Ruggles & Dr. R. Thompson, 665-9002.
- May 11 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- May 12 **Pathology Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- May 12 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- May 12 **Pathology Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- May 16 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: William Lockwood, MD; Topic: TB Update; Info: David Rossing, MD, 331-3490.
- May 16 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- May 17 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Hari Kannan, MD; Topic: Anti-Depressants; Info: David Rossing, MD, 331-3490.
- May 17 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Brian T. Hurley - 357-1340 (Barbara).
- May 17 **Geriatric Forum** - 7:00 am, RDT Network Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- May 18 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- May 18 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
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- May 19 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- May 19 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- May 24 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Brian T. Hurley - 357-1340 (Barbara).
- May 24 **Topics in Clinical Medicine - Audio Teleconference Series**; - 12:15 & 1:30 pm CT/CDT, 11:15 am & 12:30 pm MT/MDT; Info: Connie Kleinsasser, USD SM - 357-1480.
- May 25 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- May 25 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- May 25 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- May 25 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- May 25 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- May 26 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145.
- May 26 **Tumor Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- May 26 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- May 31 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Brian T. Hurley - 357-1340 (Barbara).

MISCELLANEOUS

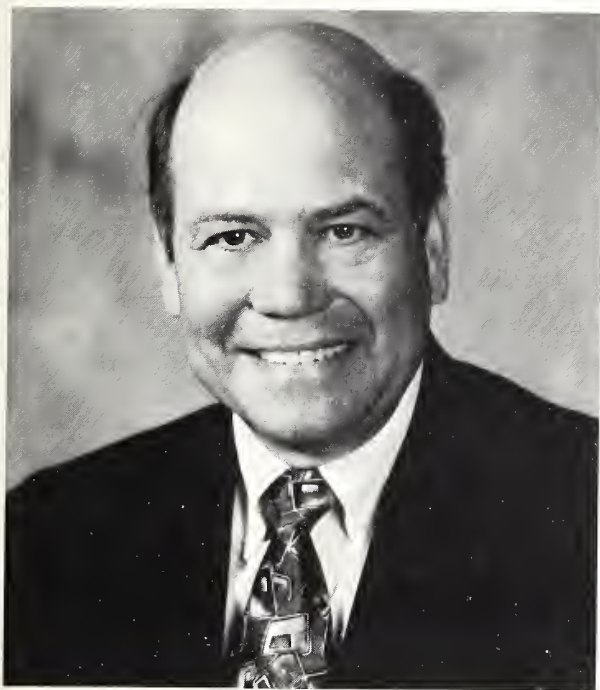
MAY 1995

- May 18-21 **Orthopaedic Review course**, Creighton Univ, Omaha, NE. AMA Category 1 credit avail. Contact: Sally C. O'Neill, Ph.D., Assoc Dean, Creighton Univ CME Div, 601 N 30th St, Suite #2130, Omaha, NE 68131. Phone: (800) 548-2633.
- May 19 **Stroke—Prevention, Treatment and Rehabilitation**, Mahoney State Park, Ashland, NE. AMA Category 1 credit avail. Fee: \$75. Contact: Center for Cont Educ, Univ of Nebraska Med Ctr, 600 S 42nd St, Omaha, NE 68198-5651. Phone: (800) 642-1095.
- May 26-28 **Family Medicine Update**, Village East Resort, Okoboji, IA. AMA Category 1 credit avail. Contact: Sally C. O'Neill, Ph.D., Assoc Dean, Creighton Univ CME Div, 601 N 30th St, Suite #2130, Omaha, NE 68131. Phone: (800) 548-2633.

JUNE 1995

- June 2-3 **International Symposium: Nuclear Antigens as Targets for Cancer Therapy**, Red Lion Hotel, Omaha, NE. Fee: \$200. AMA Category 1 credit avail. Contact: Univ of Nebraska Med Ctr, 600 S 42nd St, Omaha, NE 68198-5651. Phone: (800) 642-1095.
- June 7-10 **2nd Annual Intensive Review of Internal Medicine**, Washington Marriott Hotel, Washington, DC. AMA Category 1 credit avail. Contact: Deborah Grant, The George Washington Univ, Med Ctr, Off CME, 2300 K St, NW, Washington, DC 20037. Phone: (202) 994-4285.
- June 12-13 **Emergency and Critical Care Conference**, Village East Resort, Spirit Lake, IA. Contact: Barb Wagley. Phone: (605) 357-1340.
- June 16-17 **3rd Annual Diagnostic Dilemmas in Women's Health Care**, Omaha Marriott, Omaha NE. Fee: \$200. AMA Category 1 credit avail. Contact: Center for Cont Educ, Univ of Nebraska Med Ctr, 600 S 42nd St, Omaha, NE 68198-5651. Phone: (800) 642-1095.
- June 20-24 **Mayo/Vienna Internal Medicine Eurodate 1995**, Vienna, Austria. AMA Category 1 credit avail. Contact: Postgraduate Courses, Sec of Int'l Med Educ, Mayo Foundation, Rochester, MN 55905. Phone: (800) 323-2688.
- June 24-28 **3rd Annual Board Review in Family Medicine**, Marriott Crystal Gateway Hotel, Arlington, VA. 39 hrs AMA Category 1 & AAFP credit. Contact: Maria Gorrick, The George Washington Univ, Med Ctr, Off CME, 2300 K St, NW, Washington, DC 20037. Phone: (202) 994-4285.

President's Page



**James R. Reynolds, MD, President
South Dakota State Medical Association**

*"It is good to have an end to journey toward; but it is
the journey that matters, in the end."*

Ursula K. Leguin

So next month, my year as president of the South Dakota State Medical Association comes to an end. Fortunately the journey we are all taking in our careers in medicine will continue, but there are challenges that lie before us that we have never faced before. It is clear that the medical complex will continue to be the tail wagged by the national and state economic dog. As government struggles to balance the simultaneous demands for expanded services and more tax relief, attention will continue to focus on the delivery system for further revenue or cost reduction.

The past year has shown that this pressure will come through the free enterprise system with increasing competition and management of medical care by non-medical people. With this will come the need for physicians to re-evaluate their relationship with each other and the organizations that represent them. Currently the AMA is re-evaluating its relationship with other societies representing medical groups and specialties with the goal of establishing a federation that can build upon a bedrock of professionalism and represent medicine with unified voice. We are fortunate to have Dr Tom Krafka serving on this study group.

Recently, the California Medical Association announced its plans for reorganization by allowing representation in their house of delegates to be determined by practice modes and size of practice rather than geographic location. Included in these modes are size - small, medium, large and very large; and style - economic, hospital based, fee for service, government, and managed care. In addition, specialty societies have proportional representation thereby giving individual physicians multiple representation.

The North Dakota Medical Association has recently indicated their plan to assess the function, infrastructure and organization of their medical association to deal with the complex and rapid changes impacting the delivery of health care and the business of medicine.

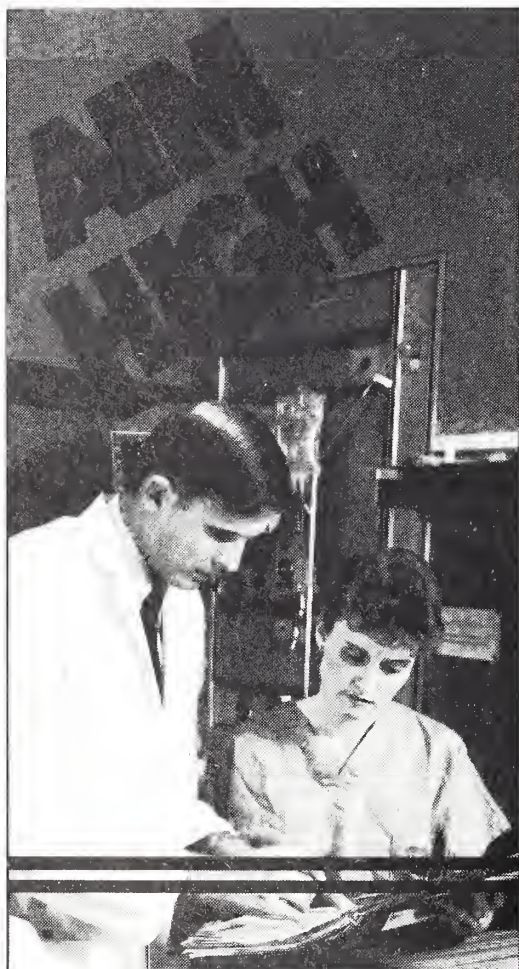
And so, the journey continues and next month the direction of the South Dakota State Medical Association will pass to the very capable hands of Dr Mary Carpenter. I thank you for the opportunity to serve this past year as president and will look forward to working closely with Dr Carpenter and the South Dakota State Medical Association on the complex issues that face us in the future.

A handwritten signature in dark ink, reading "James R. Reynolds". The script is fluid and cursive, with a large, stylized "R" at the end.

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Can We Meet the Challenge?

Human nature tends to be combative and competitive. On the one hand, this has meant that we have become so effective at war that the threat of total annihilation is an ever present possibility. On the other hand, industry and commerce have flourished under a free market competitive system.

When we have had to apply free market principle to health care delivery, we have noted significant problems. First, the law of supply and demand does not strictly apply because the demand seems to increase with the supply. Trying to reverse this trend by cutting back on supply and depriving the public of services to which they have already become accustomed is going to result in public outcry. Second, competitive services result in costly duplication of expensive technical resources which are not managed in a cost effective manner.

The challenge we now have is cooperation with one another. Whether we call it managed health care or something else, payers of previous fee for service medicine are demanding reduced and fixed payments. We could, of course, try to declare war on payers but any reasonably intelligent canine can tell you biting the hand that feeds you buys a one way ticket to the pound.

If the challenge is cooperation, who has to cooperate? Let us start with physicians. The pendulum of disparity of remuneration and control between specialists and primary care physicians has swung one way and has created dissatisfaction and resentment and now is in the process of swinging in the other direction. Regardless of deep feelings on both sides, a balance of specialty and primary care will have to be reached if the best interests of the patient are to be served. The problem is both sides must understand that compromise will be necessary.

There must also be cooperation between like practices-primary care or specialists. The only other option will be a divide and conquer process carried out by payors resulting in a lower bottom line for both payment and quality and dissatisfaction for everyone.

Another area of cooperation must be between physicians and hospitals. The fears of loss of autonomy by physicians and lack of control by hospital executives are real but must be addressed. Creating trust in these areas is a necessity. As difficult as it is for physicians and hospitals to cooperate, the same can be said about hospitals. However, major mergers by large, well known hospitals have occurred due to financial necessity to avoid costly duplication. This process must continue. Evidently, it can be done.

As we convert from a fee for service concept to a fixed or capitated payment concept, it must be understood that there really are a lot of cost savings that can be realized both inside and outside the hospital walls. These savings can be passed on to the patient easing some of the pain of reduced reimbursement provided there are not too many middlemen skimming the profits.

There is one other large area of cooperation or, perhaps, a better word is education that must take place between the health care providers and the payor or consumers constituting the individual communities involved. Medical care, often called the health care industry, is a major employer in most communities and major cutbacks mean major layoffs. Economy will be achieved, but at what price? As physicians, we have to work with leaders of the community to make them realize that changes will be made but, as it occurs, we should have something better and not just cheaper than we have had before.

John F. Barlow, MD
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Reorganizing Organized Medicine

I have just returned from the third meeting of the Consortium for the Study of the Federation, the official handle for the task force organized to explore the feasibility of reorganization. The consortium was conceived during early 1994 by leaders of the AMA; state and county medical societies, specialty societies and other physician organizations were invited to participate. SDSMA decided to join the consortium and I have attended the three meetings, May and October of 1994, and March of 1995.

The consortium's mission is to develop an organization or organizational structure to better meet the needs of physicians now and into the 21st century. Our #1 goal is to find a way to gain enough participation to be able to speak with a single unified voice on major issues such as Health System Reform. While that is a "reaching for the moon" goal, the journey toward that goal may deliver many collateral benefits.

There are approximately 160 organizations who have sent 200 representatives to the three meetings. In addition to the full consortium, there is a project team (steering committee) of 28 members and a professional facilitator.

The consortium meetings center around use of IRIS, a computerized "voting system". For each meeting the project team and staff develop a set of questions for the full consortium to discuss and vote on using the IRIS system. Questions are also formulated and modified during our sessions. Staff has also conducted "focus group" interviews with organizations who are not represented in the consortium and that information is added to our data base. The IRIS system allows instant assessment of the consortium opinion and with cross-referencing demographic information about the participants, we can explore possible prejudices, etc.

The first meeting (May 1994) was long on process and short on results and after it, I nearly recommended the SDSMA withdraw from the consortium. During our last 2 meetings significant progress has been made toward developing consensus. The model that has the most support from the consortium has this appearance:

- 1) Available single dues structure for local, state, national and specialty society membership with significant financial incentives over separate membership.
- 2) Separating functions of organized medicine to that organization that performs it best: for example, education to specialty societies, practice parameters to national organization. etc.

- 3) Use of a federation House of Delegates (modified AMA House of Delegates) with membership change to "fairly" represent not only geography but specialty, economic circumstances and special characteristics, i.e. sex, age, ethnic background, etc.
- 4) Increased use of electronic communications, i.e. establish database accessible to all members.

The consortium's next step is to assemble the nuts and bolts on these ideas and explore feasibility; (will specialty societies give up autonomy, will the AMA and current AMA House of Delegates give up the current organization, and will the membership of the various organizations support unification, etc?) Most of the representatives of the various organizations represented in the consortium are supportive of the concepts but as with most undertakings, the Devil will be in the details. If enough general consensus is reached to warrant proceeding, the consortium will recommend establishing an independent "Federation Coordinating Body" to negotiate and implement the reorganization.

Now that my skepticism has abated somewhat, I am convinced that the consortium is committed to making change. It is possible to build a new organization that will attract a larger and more diverse membership and approach the goal of speaking with a unified voice for physicians. We can also benefit from reducing the redundancy of multiple organizations and by focusing specific responsibilities and tasks to that organization most capable.

The ideas, opinions and prejudices of individual physicians can ultimately decide the fate of this project, but only if the leadership of the organizations involved know what their membership wants. It is very important that all physicians be informed and involved, not only through SDSMA and the AMA, but through all of the physician organizations. SDSMA needs to know what the membership wants. Please phone, FAX or send your inquiries and advice.

Tom Krafka, MD
SDSMA Representative to The Consortium
for the Study of the Federation

Group B Streptococcal Infections in the Perinatal Period: Current Approaches

William J. Watson, MD and Lawrence J. Fenton, MD

ABSTRACT

Group B streptococcal (GBS) infection in the neonate is the most common infectious cause of perinatal morbidity and mortality. There is much confusion in the literature regarding screening and treatment for this disease. The authors review recent literature on perinatal GBS infection and present their clinical opinions in favor of routine screening during pregnancy. Treatment protocols for the GBS positive mother, as well as the infant delivered of a GBS positive mother are considered.

MATERNAL ASPECTS

The Group B streptococcus, transmitted perinatally, is the most common cause of neonatal sepsis in the United States, affecting approximately two neonates per 1000 live births. Although most infections occur in term neonates, the incidence of infection and the mortality rate are greater in preterm infants. Several studies have indicated that intrapartum antibiotic treatment, given to colonized mothers, is effective in reducing both morbidity and mortality in the neonate.¹

Why, then, is there difficulty in treating this perinatal infection? Approximately 15% of pregnant women carry GBS in the lower genital tract. However, this colonization with GBS may be present only intermittently in many. Therefore, cultures done early in pregnancy may not reflect the colonization status at the time of delivery. More and more obstetrical care providers are screening all pregnant women for GBS. The organism remains sensitive to penicillins in all cases, and these drugs are known to cross the placenta with good effectiveness. They remain the best antibiotics in the armamentarium against GBS infection in the neonate.

Screening and treatment of mothers to prevent neonatal GBS infection has not been practiced by all clinicians. The decision of whether to screen for GBS must first be evaluated by epidemiologic criteria for a useful screening test. The following factors must be considered: (1) Is the disease clinically important? (2) Is the disease prevalent? (3) Is treatment available?

(4) Is treatment relatively safe and effective? (5) Can a treatment protocol be followed?

GBS infection in the neonate is certainly an important clinical problem. The incidence of severe neonatal sequelae seems great enough to warrant screening and, in most instances, penicillin treatment is safe. The culture and antibiotic therapy are relatively inexpensive and several investigators have demonstrated that treatment protocols can be followed. The authors believe that GBS screening should be considered by all practitioners caring for pregnant women.

Several commonly asked critical questions follow:

How and when should GBS cultures be done? It is clear that the colonization rate of the outer third of the vagina and the rectum is higher than that of the cervix and screening should not be confined to cervical cultures alone. At present, to the best of our knowledge, the optimal screening method is to take a single swab and culture first the outer third of the vagina and then the maternal perianal area, using selective media to inhibit coliforms. At present, the best selective media is called Todd Hewitt broth which contains nalidixic acid and gentamicin. The use of selective media may improve the detection rate by as much as 30% to 40% and the inclusion of a rectal culture also significantly improves the sensitivity of the culture for GBS.² If selective media is not available, then a culture from the outer third of the vagina should be taken. Because of the nature of intermittent colonization during pregnancy, a culture is best done in the third trimester (between 26 and 36 weeks gestation).

How should the clinician caring for the pregnant woman manage a positive culture? Is immediate treatment indicated? Immediate treatment is not indicated unless GBS is isolated from the urine. A positive urine culture for GBS indicates heavy maternal colonization. Treatment is indicated even if the urine culture is positive for just a few thousand GBS per ml.

If the screening vaginal/rectal culture is positive, then immediate treatment is not necessary. However, if the patient develops preterm labor or preterm premature rupture of membranes, then treatment of the mother is indicated.

There is no question that any delivery before term in a mother with a positive GBS culture warrants antibiotic therapy. If the mother progresses to term, however, there is no consensus as to how to treat asymptomatic mothers who are colonized. Clearly, most of these infants do well without therapy because the rate of severe neonatal infection (2 per 1000 infants) is much less than the maternal colonization rate of 15%. Some investigators feel that treatment of all patients in labor is indicated if they have positive cultures. Others advocate treatment only if high risk factors are present, specifically rupture of membranes greater than 12 hours, maternal fever in labor, or any evidence of fetal distress. The authors favor treatment of all patients with a positive culture in labor regardless of whether high risk factors are present. This is based on our experience with many cases of GBS sepsis in term infants in whom no risk factors were present.

Rouse, et al, recently studied the options for prevention of early onset neonatal GBS sepsis.³ It appears that another reasonable course of action to prevent GBS sepsis is to do no cultures and to treat based solely on the presence of high-risk factors. However, due to our experience with sepsis in infants without any of these known high-risk factors, we still favor universal cultures with treatment of those with positive GBS cultures in labor.

How should I treat a patient with premature rupture of membranes and unknown GBS culture status?

If a mother has ruptured membranes before 37 weeks, because of the devastating nature of GBS infection, there is good evidence to indicate that she should have cultures performed and then be treated with antibiotics pending culture results.⁴ If they return negative, then the antibiotics can be stopped. If they are positive, then the mother should receive a full course of at least 7 to 10 days, if she has not delivered by this time. In the case of a GBS positive mother with prolonged rupture of membranes after a course of antibiotic therapy of 7 to 10 is completed, the patient could be recultured intermittently and treated if GBS is again isolated, or she could be treated with a suppressive dose of penicillin 250 mg twice daily.

In a patient with idiopathic preterm labor and intact membranes in whom culture status is unknown, it is also reasonable to obtain cultures and begin therapy, and then stop antibiotics if the cultures return negative. We use this treatment protocol in the patient with intact membranes and advanced cervical dilatation.

What are antibiotic treatment options? To our knowledge, GBS is uniformly sensitive to penicillin. Both penicillin and ampicillin are effective treatments. Although most investigators have used ampicillin, penicillin therapy offers an effective, less broad spectrum alternative, which theoretically may prevent the emergence of other resistant organisms.⁵ Cephalosporins, clindamycin or erythromycin are acceptable second line agents. If a mother has a true serious allergy to penicillin, then perhaps cephalosporins should be avoided. Erythromycin does not cross the placenta as reliably as penicillin and may not offer in utero treatment or protection for the fetus. A patient in labor should be treated with intravenous antibiotics because of irregular gastrointestinal absorption during labor. We use 1 gram of ampicillin IV every 6 hours until delivery. A non-laboring patient who requires treatment, such as a patient with preterm PROM, can be treated with oral antibiotics.

NEONATAL ASPECTS

Each year over 1,500 newborns die from GBS sepsis acquired in the first week of life, and an equal number experience significant long-term morbidity.⁶ High-risk factors for sepsis in the newborn include prematurity (gestational age less than 38 weeks), rupture of membranes for more than 12-18 hours, maternal fever during labor, chorioamnionitis, perinatal asphyxia, multiple births, maternal bacteriuria due to GBS and a high inoculum of GBS in genital cultures. Although these various factors may be associated with a 5 to 35-fold increase in risk, it must be remembered that the majority of babies who develop sepsis have none of these risk factors. Therefore, any signs and symptoms of sepsis in the newborn must always be accompanied by a high index of suspicion. The absence of any particular risk factor, **including a negative maternal vaginal culture**, does not in any way rule out the possibility of sepsis in the newborn. In addition, it should not be forgotten that *E. coli* and other gram negative organisms remain potent causes for neonatal sepsis.

The presence of any of the risk factors mentioned above with any neonatal symptomatology should mandate an immediate work up (principally a blood culture and CBC) and beginning IV therapy consisting of ampicillin and gentamicin. The antibiotic therapy should not be delayed while waiting for a CBC result. The approach to symptomatic infants without any high-risk factors is similar but some clinical judgment may modify whether immediate work up and treatment is

necessary, depending on the severity of the symptoms. A normal CBC, chest roentgenogram, arterial blood gas and blood sugar may be reassuring when symptoms are mild, thus permitting further observation rather than immediate treatment. Any infant requiring oxygen to maintain saturations above 94% for more than 20 minutes should be regarded as abnormal. An oxygen requirement associated with any symptoms such as grunting respirations, pallor, hypoglycemia or metabolic acidosis is always ominous and mandates immediate antibiotic therapy. A lumbar puncture is always indicated when sepsis is thought to be highly likely, a full course of antibiotic therapy is contemplated and the infant is sufficiently stable to tolerate the procedure. In a high risk situation, antibiotic therapy should not be delayed in order to perform a lumbar puncture.

Questions more frequently arise as to whether intrapartum treatment of the mother should modify the approach to an asymptomatic baby both with regard to starting antibiotics and the duration of therapy. Further questions may occur regarding the duration of therapy in symptomatic infants whose cultures are negative. The frequent usage of GBS antigen detection tests on newborn urine specimens further complicates the issue. Some important clinical questions follow:

1. What does a positive GBS antigen test on the urine mean? There is a 5% to 12% false positive rate. Most of the false positives come from contamination of bag specimens, but can also come from gastrointestinal absorption of antigen. This high false positive rate makes the urine latex test an unsuitable "screen" for sepsis in asymptomatic infants. Although it may indicate invasive infection, clinical therapy should not be based on a positive test alone. A positive test does indicate with certainty, however, that the baby has been exposed to GBS. The test does have clinical applicability in certain situations. For instance, a positive latex in a baby with respiratory distress, leukopenia, and increased number of bands in the differential is much less likely to be a false positive and indicates that the GBS is probably the causative organism. Some authors have advocated initiating treatment of an asymptomatic but high risk baby when intrapartum antibiotics have been used and there is a positive urine latex for GBS.⁷ We would concur with this approach.

2. How should the white blood count be used? Of all the laboratory tests available as a screen, the CBC and differential still remain the most reliable.⁸ In the first 24 hours of life, a white count of less than 10,000/mm³ should be regarded with suspicion and a white count of less than 5,000/mm³ should be considered as sepsis until proven otherwise.⁹ Although extremely low birth weight babies may have fairly low white counts, from a clinical standpoint it is probably wise to use the same parameters for premature babies. If the ratio of immature to total polymorphonucleocytes

is between 0.2 and 0.3, these results should be considered abnormal and regarded with a high degree of suspicion.¹⁰ If the ratio is 0.3 or greater, it should be considered sepsis until proven otherwise. Sepsis may cause the CBC to change rapidly in 6 to 12 hours.¹¹ Therefore, a repeat CBC in 6 to 12 hours may be helpful in deciding whether to treat an asymptomatic infant or whether to continue treatment in the face of negative blood cultures. If the CBC becomes abnormal, a full course of therapy is indicated.

3. Should the use of prophylactic maternal antibiotics influence treatment of the infant? It is important to note that maternal antibiotics should be given at least 4 hours prior to delivery in order to allow ample time for placental circulation and peak levels to be reached in the fetus and amniotic fluid. A shorter period of time may not confer any protective effect. There are no clinical data on which to base the management of babies whose mothers have received intrapartum antibiotics. Maternal treatment with antibiotics should **not** influence a decision to start antibiotics in the newborn. Such treatment, however, may confound the decision of whether to stop or continue antibiotics in the baby. It is certainly possible that a baby with true GBS sepsis may have a sufficient antibiotic level at birth to cause a blood culture to be negative.¹² Therefore, clinical judgement must determine the duration of antibiotic therapy in babies who are symptomatic with negative cultures, or asymptomatic but have abnormal laboratory results and negative cultures. In general, there are four major parameters that should be considered when trying to make these clinical decisions. They are: (1) the severity of the clinical symptoms of the baby when therapy begins; (2) the presence of maternal fever and/or chorioamnionitis; (3) maternal culture positivity; and (4) gestational age. In certain borderline clinical situations such as minimal clinical symptoms with a normal CBC or an abnormal CBC in an asymptomatic infant, intrapartum prophylaxis tends to place a question mark on the meaning of a negative culture and may necessitate a full course of treatment. The following case examples illustrate some empiric approaches to these problems. Try to think through each case and come up with your own plan before reading the management suggestion.

CASE #1

- *Full-term infant absolutely asymptomatic
- *Mother febrile at delivery with chorioamnionitis
- *Prophylactic antibiotics started 10 hours before delivery
- *Mother culture positive for Group B Strep

Should treatment be started?

Management:

1. Yes. Do a blood culture, a CBC, and begin IV therapy with ampicillin (100 mg/kg/dose every 12 hours) and gentamicin (2.5 mg/kg/dose every 12 hours).
2. Repeat CBC in 12 hours.
3. At 72 hours antibiotics may be stopped if: (a) the infant remains asymptomatic; (b) both CBCs were normal; and (c) blood culture was negative. If any of the above were positive or abnormal, treatment should be continued for 7 to 10 days and a lumbar puncture done as well. Treatment should continue for 10 to 14 days if blood cultures were positive or if the spinal tap is positive or if the infant developed significant symptomatology. The presence of meningitis mandates a minimum of 21 days of therapy.

Comment: The case above illustrates the importance of chorioamnionitis and maternal fever as risk factors mandating immediate work up and treatment regardless of infant symptomatology or use of intrapartum antibiotics.

CASE #2:

Same as above except in a 34-week baby.

Can treatment be stopped at 72 hours if cultures are negative?

Management:

No. The risk for mortality due to sepsis is so high that even if all laboratory values are normal, the premature baby in this situation deserves a minimum of 7 days of therapy.

CASE #3:

- *Full-term infant, asymptomatic
- *Culture positive mother
- *Ruptured membranes 24 hours
- *Mother afebrile
- *Antibiotics started 10 hours before delivery

Should treatment be started?

Management:

1. No. Do a CBC and observe. Development of any clinical signs or symptoms mandates culture and treatment.
2. Repeat CBC in 12 hours. If either CBC is abnormal, do blood culture and start treatment.

Comment: The above illustrates the principal that prolonged rupture of membranes without any other risk factors in an asymptomatic term baby indicates probable exposure and colonization but does not mandate treatment. The maternal treatment probably prevented vertical transmission of the organism.

CASE #4:

Same as above with a 34-week baby.

Should treatment be started?

Management:

Yes. The risks are high enough for a premature baby to do an initial screen and begin therapy. Therefore, CBC, blood culture and antibiotic treatment should be started. It can be stopped at 72 hours if all results are negative. If a urine latex is positive, treatment for 7 to 10 days is indicated.

CASE #5:

*Full term infant

*Respiratory rate 60-70 with occasional grunting

*Mother culture positive for GBS and received intrapartum prophylaxis 6 hours prior to delivery

*Initial WBC was 7000/mm³ 50% PMNs and 30% bands.

*A blood culture was done and antibiotics started. Twenty four hours later the baby is asymptomatic but a repeat WBC was 30,000/mm³ with 30% PMNs and 50% bands

*At 72 hours the cultures are negative, baby remains asymptomatic and the CBC is normalizing.

Should treatment be stopped?

Management:

No. The initial symptoms with a known maternal GBS carrier would have been sufficient to do a blood culture and begin antibiotics. The CBC confirmed the necessity of beginning treatment. Even though the infant's symptoms resolved at 24 hours, the CBC was sufficiently abnormal to mandate a 10 day course of therapy. It is common to see a rebound rise in the mature and immature polymorphonucleocytes following antibiotic therapy and indicates that the marrow was being suppressed by the infection. A spinal tap should have been performed as soon as the baby was stable.

In the final analysis clinical judgment is the predominant determinant of whether treatment is indicated. However, we believe that for the past several years the GBS has been particularly virulent and any delay in therapy could be costly. Over 10% of infants with sepsis have a normal early CBC and differential. A general rule of thumb is that all babies in whom sepsis is suspected should be treated as a medical emergency. That means transferring the baby rapidly to the nursery, drawing blood cultures, starting an IV and giving a slow push of ampicillin followed by the gentamicin dose dripped over 30 minutes. If an IV cannot be started, an intramuscular injection is effective unless peripheral perfusion is poor. A thirty minute delay in starting

antibiotics while waiting for a laboratory test may have life threatening consequences for a baby with sepsis. It is estimated that nearly 20% of babies with proven sepsis at autopsy have negative blood cultures.¹³ The mortality and morbidity due to early onset GBS sepsis is sufficiently high to warrant erring on the side of overtreatment. A study of two major tertiary neonatal units in the Boston area indicated that the ratio of babies treated with antibiotics to those with positive blood cultures ranged from 15:1 to 28:1.¹⁴ Very early therapy sometimes precludes a positive blood culture but saves lives.

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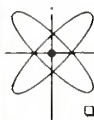
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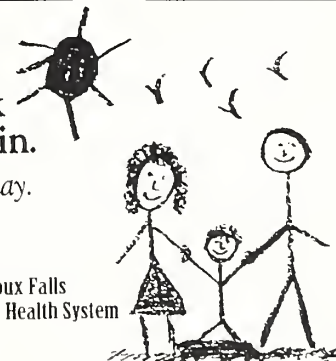
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Risperidone for the Treatment of Schizophrenia: Does it have a Niche?

Paul L. Price, Pharm.D, Sioux Falls, SD

The devastating psychiatric diagnosis of schizophrenia is defined as, "A disorder of unknown etiology, which is characterized by psychotic symptoms that significantly impair functioning and that involves disturbances in feeling, thinking and behavior".¹ Schizophrenia is chronic in nature and usually has a prodromal phase, an active phase with delusions, hallucinations, or both, and a residual phase in which the disorder may be in remission.¹

The prodromal phase consists of a marked decrease in one or more of the major areas of functioning such as work, interpersonal relations, or self-care since the onset of the disturbance. The active phase consists of two or more of the following, each present for most of the time during a one month period: (1) delusion, (2) hallucinations, (3) disorganized speech, (4) grossly disorganized or catatonic behavior and (5) negative symptoms. During the prodromal or residual phases, the signs of the disorder may be displayed by only negative symptoms or two or more symptoms from the active phase list above. In order to receive the diagnosis of schizophrenia, one must have continuous signs of the disturbance for at least six months, and the exclusion of other causes such as affective disorders, drug or medication abuse, general medical conditions, or pervasive development disorders.² Several subtypes of schizophrenia exist, but it is not the focus of this article to address the issue further.

Schizophrenia, as mentioned before, is a devastation in the overall public health arena. The worldwide lifetime prevalence approximates 0.85 percent. The group of primary impact are the young; they have poor long-term outcomes. Since the disease attacks the distinguishing personal traits of individuals, it has a very significant impact on these people and those around them. The direct and indirect costs of the disease in the United States in 1990 were an estimated 33 billion dollars, and these costs accounted for 2.5 % of total health care expenditures. Finally, it is estimated that schizophrenia afflicts 1/3 to 1/2 of all the homeless population in the United States.³

The substantial impact to society in general obviously leads one to discuss treatment options. In order to discuss treatments, one must review the theoretical pathophysiologic causes of the disease (theoretical since the exact pathophysiology is still undetermined). These theories have been developed from a combination of neuropathologic observations, of ideas about the relationships between the brain and behavior, and of

the understanding of the pharmacology of certain medications.³ From this basis there are approximately nine biochemical hypothesis of the disease which include: (1) dopamine, (2) norepinephrine, (3) GABA, (4) serotonin, (5) phenylethylamine, (6) hallucinogens, (7) enzymes, (8) endorphins and prostiglandins and (9) gluten.^{1,3} The most popular of the nine probably include the first four, but since treatments using these hypothesis have not been extremely successful, a multifactorial hypothesis might be more appropriate.³ In this regard drug therapies that have focused on two biochemical areas have been at least somewhat more successful.

All of the current antipsychotic drugs on the market, with the exception of clozapine and risperidone, claim dopaminergic blocking activity as their primary mechanism of action. The older antipsychotic agents have proven their efficacy repeatedly in the treatment of psychotic disorders, at least acutely, but in the long term treatment the benefits of therapy are not as impressive. A number of reasons may contribute to the weaker long term benefits of this drug therapy which include side effects (cardiovascular, gastrointestinal, sedation, weight gain and extrapyramidal symptoms) and compliance issues. Probably the most significant side effects are the extrapyramidal ones (acute and tardive dystonic reactions, akathisia, akinesia and tardive dyskinesia) some of which can be irreversible.³ Since most of these patients require long term therapy, the side effects certainly are inhibitory to the use of these drugs. The older antipsychotic agents also lack effectiveness on the negative symptoms of schizophrenia (restricted affect, diminished emotional range, poverty of speech, curbing of interests, diminished sense of purpose and diminished social drive).³

The atypical agents (clozapine and risperidone) seem to possess some advantages to the older antipsychotic agents which possibly can be attributed to their dopaminergic and serotonergic blocking activity.⁴ Clozapine seems to be very effective in treatment resistant patients and may have a lesser potential for causing tardive dyskinesia, but, unfortunately, its use has been limited by the potential for patients to develop agranulocytosis.^{3,4}

Risperidone, approved by the FDA in December of 1993, has been shown to improve the positive and negative symptoms of schizophrenia in clinical trials. The drug is associated with a lower incidence of ex-

trapyramidal symptoms in comparison to the older agents, has not been associated with tardive dyskinesia, and does not require hematologic monitoring as does clozapine.⁴ Risperidone does have some disadvantages including cost (approximately \$2200 per year), the potential to cause orthostatic hypotension at least in the initiation phase, and long term use data has not been fully evaluated.⁴

In conclusion, risperidone provides an alternative to the pharmacotherapy of schizophrenia which has not been available in the past, and also provides further understanding to the pathophysiologic mystery of this devastating disease.

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I have been delighted by the Medical Association's continuing commitment to the Medical Alliance. Your continued support is greatly appreciated by the entire Alliance. I would be remiss if I did not express my deep gratitude to the wonderful staff of the SDSMA. What a talented and committed resource for the South Dakota medical community! Without the excellent assistance of Bob Johnson, Jan Anderson, Dean Krogman, Jeri Spars and their supporting staff, the job of being SDSMA Alliance President would have been a lot harder. I have also been overwhelmed by the generous support given to me by your President, Dr James Reynolds and the SDSMA Council.

It is good to know that our partnership remains strong. As we kick off our family violence campaign in

June, I hope you will join with me in celebrating the past year and anticipating the fruits of our continued collaboration in the future.

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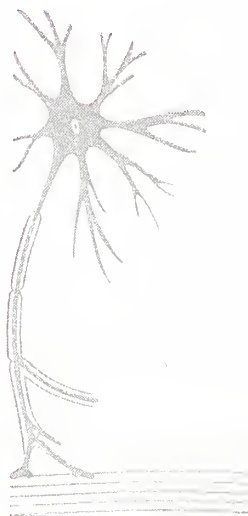
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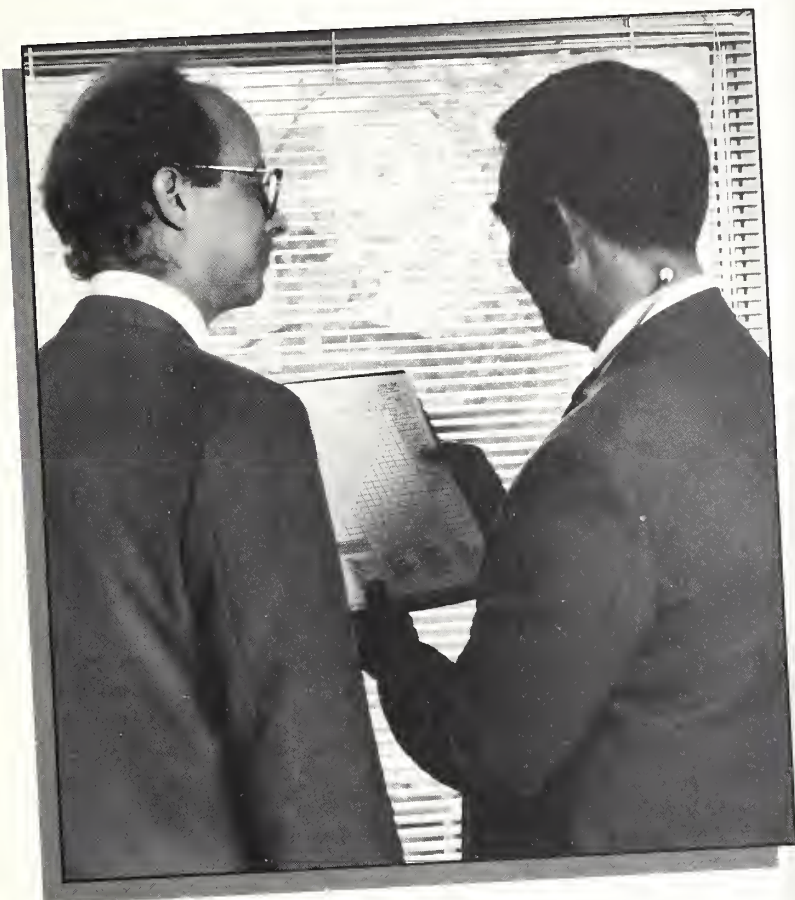
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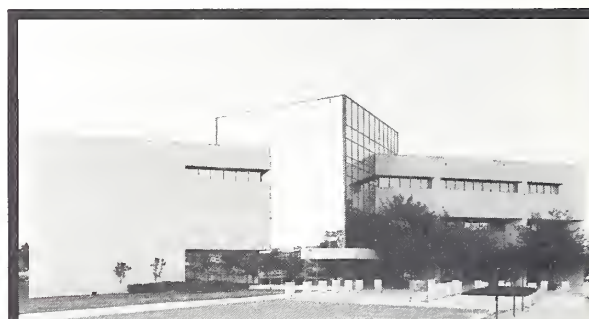
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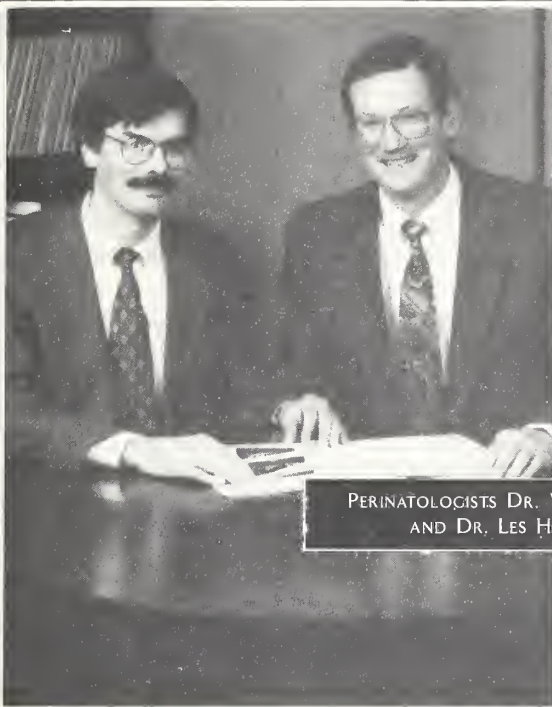
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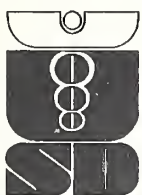
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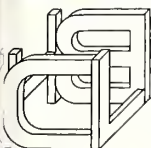
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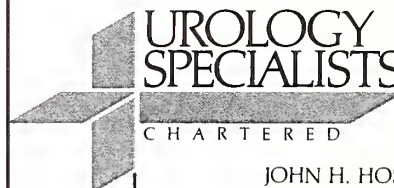
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Management of Febrile Children

The overall infant mortality rate in South Dakota was 9.3 per thousand live births in 1992, the most current year available. The rate for American Indian infants, whose mothers reside in reservation counties of South Dakota, was 18.03 for the same year, while the rate for U.S. (all races) was 8.45.

The Aberdeen Area Indian Health Service (IHS) has been conducting infant mortality reviews for a number of years. There have been two infant deaths in 1993 that deserve special attention because they involve infections in infants that had seen providers for fever shortly before death. We felt that review of standards for the care of febrile infants might be helpful for all providers in South Dakota, since many American Indian infants are seen by practitioners outside of the IHS. The IHS has also distributed information to our administrative staff, indicating the very serious nature of fever in young infants, and that these encounters should receive the highest priority for payment of contract health funds. We have emphasized the need for hospitalization in many of these cases and discouraged requiring parents to take the infant to other facilities due to the rapid onset of septic shock in some instances and the possible lack of compliance on the part of the family.

The following suggestions are summarized from a recent review paper in Pediatrics 92:1-12, 1993. This was the result of an exhaustive literature search and consensus panel effort. We realize that many of these suggestions are formulated on the assumptions of suburban life with close access to medical care, excellent communications, etc; if anything we feel our rural practices probably need to rely more on hospitalization and careful evaluation than indicated here.

In the interest of brevity all of the following refers to **infants and children less than 36 months of age, with temperatures over 100.4F (38.0 C); and no apparent source of infection. Even when a "source" (eg. otitis media, chickenpox) of infection is identified, practitioners need to remember that an infant may also have another or more extensive infectious problem (eg. meningitis, septicemia). A "septic workup" must include:**

culture of CSF, Blood, Urine
CSF exam for cells, glucose, protein
CBC, Diff
U/A

"Treatment" refers to empiric parenteral antibiotic therapy until cultures or occasionally a particular focal source indicate alternate choices. Ceftriaxone 50

mg/KgQD is the antibiotic most frequently evaluated in these circumstances.

All toxic appearing children from newborn to 36 months of age should be **hospitalized for septic workup and empiric treatment.** "Toxic" of course indicates lethargy, poor eye contact, lack of interest in surroundings, hypo/hyperventilation, pallor, cyanosis etc.

In Non-toxic situations:

All infants in the newborn to 28 day range should be hospitalized, have a septic workup and be treated.

Although infants 28-90 days of age that meet the following criteria:

good gen'l health,
no focal infection
WBC between 5-15,000
less than 1500 bands
normal U/A
if Diarrhea, < 5 WBC/hpf

still have a probability of 1% for septicemia and 0.5% for meningitis; you may consider managing them at home with close followup **after a septic workup and treatment.** These infants need **followup visits in 18-24 hrs.** A small number of the panel felt that infants in this group could be managed as outpatients by urine culture evaluation and followup in 24 hrs.

Children in the 3-36 month range, who have temperatures less than 102.2 F (39 C) may be managed symptomatically, at home with followup in 48 hrs if not better. Other children with higher temperatures should have the following:

Urine Culture (males < 6 months, females < 24 months)
Stool culture with diarrhea, bloody stool, mucous etc
CXR with respiratory symptoms
Blood culture, if WBC over 15,000
Empiric treatment, if WBC over 15,000
Followup in 24-48 hrs

Febrile infants and children are a challenging, grey-hair provoking, usually middle-of-the-night problem for primary care providers; but perhaps we can take encouragement from the fact that in these instances we truly can "make a difference".

Any comments/suggestions are very welcome.

Lyle Best, MD, AAIHS
PO Box 160
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Phone: (701) 477-8453

South Dakota Foundation for Medical Care

Take a Second Look at Your Hospital's Quarterly Reports

Thirty days after the end of each calendar quarter, South Dakota Foundation for Medical Care (SDFMC) provides each hospital a series of review profiles. Several of these reports lend themselves to provider analysis in support of continuous quality improvement (CQI) activities. Although for most hospitals the reports will not suggest any particular patterns, in some situations the reports can be used to identify potential concerns, quantify these concerns, and measure the impact of corrective actions.

Because SDFMC currently reviews a **random** sample of Medicare claims, the prevalence of a pattern of concern in the review sample could suggest a similar pattern in the rest of the Medicare discharges from the hospital. Therefore, the identification of any pattern on the SDFMC profiles is a good starting point for further investigation.

The most useful report is probably the SDFMC Category of Concern Report, which subtotals the number of identified concerns and problem cases for each of the categories of concern. The concerns are further grouped among utilization, quality of care and coding issues. The report provides the rate of occurrence of these concerns in the total claims reviewed, as well as the hospital's proportion of identified similar concerns in the state. Probably a starting point in the use of this report is the setting of a standard threshold for each of the categories which would prompt additional investigation. A threshold might be a minimum of five concerns for a category with a rate exceeding ten percent of reviews performed. Setting the threshold is a task best performed by the agreement of the hospital medical staff.

Considering the random nature of the review sample, it's important to consider the proportion your facility comprises of the total similar concerns identified in the state. For example, if SDFMC identifies a dozen cases with category C10 at your facility (i.e. failure to develop and initiate appropriate discharge, follow-up and/or rehabilitation plans), and this total comprises 22% of a total 55 such cases in the entire state, it suggests a different pattern of care at your hospital than that followed in the rest of the state.

SDFMC provides an additional report listing the actual cases with the identified concerns and a precise description of the individual problem. For prevalent categories of concerns at the hospital, SDFMC suggests that a hospital evaluate the specific nature of the problems to determine if they are unique issues or a reoccurrence of the same issue. A reoccurrence could result from a failure in the system or process of care, which would be a correctable issue.

If the hospital staff identifies a problem and takes corrective action, an additional report in the SDFMC quarterly profile series can be used to measure impact. The report entitled *Final Concerns By Medicare By Hospital* indicates for each category of concern the number of final notices issued during each of the last four quarters. The report also indicates in which quarter these problem cases were admitted. Using this report, a hospital can measure impact by determining if the problem persists for admissions occurring after corrective action.

As we have shown, the SDFMC quarterly profiles can sometimes be a useful tool in a hospital's CQI activities. SDFMC staff are available for assistance in the analysis of these reports or the generation of statistical reports.

Gerald Tracy, MD
Medical Director

Council Meeting Highlights

The Council of the South Dakota State Medical Association met on Friday, March 31, 1995, in Sioux Falls, South Dakota. Following are highlights from that meeting.

1. **ASSOCIATION GROUP HEALTH INSURANCE**—The State Medical Association will offer group health insurance coverage to its membership through DakotaCare and South Dakota Blue Shield.

South Dakota Blue Shield and Blue Cross of South Dakota separated effective early in 1995, and the Executive Commission, after hearing proposals for health insurance programs from both companies, recommended that the State Medical Association offer group coverage through South Dakota Blue Shield. The Council concurred with this recommendation.

2. **LEGISLATIVE GRAB BAGS**—The Council recommended that the format utilized for the legislative Grab Bags be changed in 1996. Instead of listing all legislative bills dealing with medicine, each Grab Bag will focus on two or three major pieces of legislation and will offer recommendations for physician action. As was done in 1995, the Grab Bag will be faxed to those physicians who have fax capabilities, and mailed to the remainder of the physician offices.
3. **ENDOWMENT ASSOCIATION BOARD OF DIRECTORS**—The Council re-appointed the following members to serve on the Endowment Association Board of Directors for the coming year:

Warren Jones, MD
Howard Saylor, MD
Bruce Lushbough, MD
T.H. Sattler, MD
Robert Giebink, MD
Bruce Allen, MD

4. **ELECTION TO SODAPAC BOARD OF DIRECTORS**—The Council elected the following to serve on the SoDaPAC Board of Directors for three-year terms:

Marie Hovland	Scott Eccarius, MD
Lucio Margallo, MD	Richard Porter, MD
Thomas White, MD	Robbin Ahrlin
John Sall, MD	Marlys Porter
John Barlow, MD	Kevin Bjordahl

In addition, the Council elected Dr. M. Venugopul to complete a one-year term representing District 3.

5. **RESOLUTION FOR AMA HOUSE OF DELEGATES**—The Council voted to submit the following Resolution to the AMA for consideration by the House of Delegates at its meeting in June, 1995.

WHEREAS, pharmaceutical companies are notifying pharmacists they will pay to the pharmacist a fee to provide counseling services regarding their product; and

WHEREAS, patients are asking their physicians to change their prescriptions to one recommended by the pharmacist who, in turn, receives a counseling fee from the pharmaceutical company; and

WHEREAS, there is potential for the unethical practice of pharmacists when they are reimbursed by pharmaceutical companies to recommend a prescription change to patients; and

WHEREAS, AMA policy 125.995 opposes legislation allowing pharmacists to dispense a drug product which differs in the salt or dosage form or contains a different pharmaceutical moiety, other than what is prescribed by the physician; therefore

BE IT RESOLVED, AMA policy 125.995 be reaffirmed; and

BE IT RESOLVED, AMA policy be established stating it is unethical for a pharmacist to recommend to a patient that the patient's prescription be changed to a product manufactured by a pharmaceutical company which in turn reimburses the pharmacist as a consultant; and

BE IT RESOLVED, the AMA Board of Trustees notify the American Pharmaceutical Association of this action and encourage the American Pharmaceutical Association to adopt similar policy.

6. **ELECTION TO HONORARY LIFE MEMBERSHIP**—The following physicians were elected to honorary life membership in the South Dakota State Medical Association:

James Ryan, MD - Sioux Falls
E.W. Sanderson, MD - Sioux Falls
Dale Bergeron, MD - Rapid City

The next Council meetings will be held in conjunction with the annual meeting of the State Medical Association, June 8-10 in Sioux Falls.

CME Conferences

CME Conferences being held on a regular basis at various health care facilities throughout the state of South Dakota.
(1 hour AMA Category 1 credit available unless otherwise specified)

CME CONFERENCES

MAY 1995

- May 16 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- May 17 **Cytology/Pathology** - 12:00 noon, Montana Room, Rapid City Regional Hospital, Info: Medical Staff Office - 341-1027.
- May 17 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Info: David Rossing, MD, 331-3490.
- May 17 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium; Speaker: Elenor Young, MD; Topic: Obesity; Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- May 18 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- May 18 **Neuroscience Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- May 18 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- May 18 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- May 18 **Geriatric Forum** - 7:00 am, RDTN Studio, Rapid City Regional Hospital, Info: Medical Staff Office 341-1027.
- May 19 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- May 19 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Speaker: Joseph Cass, MD; Topic: "Treatment of Options in Prognostic Consideration of Rheumatoid Arthritis"; Info: Med Staff Office - 341-8107.
- May 24 **Surgery/Pathology** - 12:00 noon, Montana Room, Rapid City Regional Hospital, Info: Medical Staff Office- 341-1027.
- May 24 **Topics in Clinical Medicine - Audio Teleconference Series**; - 12:15 & 1:30 pm CT/CDT, 11:15 am & 12:30 pm MT/MDT; Info: Connie Kleinsasser, USDSM - 357-1480.
- May 24 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- May 24 **Pulmonary Symposium**- Sioux Valley Hospital Auditorium, 3 hours Category 1; Info: Ruth Krueger- 333-1890.
- May 25 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- May 25 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- May 25 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- May 25 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- May 25 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- May 26 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145.
- May 26 **Tumor Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- May 31 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).

JUNE 1995

- June 1 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- June 1 **Clinical Pathology Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Info: Dr's J. Ruggles & R. Thompson, 665-9002.
- June 01 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- June 1 **Biomedical Ethics** - East Auditorium, Rapid City Regional Hospital, Info: Medical Staff Office - 341-8705.
- June 1 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- June 2 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- June 2 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.

- June 6 **CPR Certification/Recertification** - 7-10:00 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- June 7 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- June 8 **Internal Medicine, Tumor Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Info: Dr. J. Ruggles & Dr. R. Thompson, 665-9002.
- June 8 **Cardiac Cath Conference** - 7:30 a.m., McKennan Hospital Auditorium, Info: Cardiopulmonary Dept, 339-8171.
- June 8 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- June 8 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- June 8 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- June 8 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- June 9 **Pathology Conference** - 12:30 pm, Brookings Hospital, Info: Phyllis Sander, RN, 692-6351.
- June 12 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145
- June 13 **Breast Cancer Conference** - 12:00 noon, Meeting Room B, Sioux Valley Hospital, Info: Dr. Thomas Cink - 333-5244.
- June 14 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- June 14 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- June 15 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- June 15 **Neuroscience Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- June 15 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- June 15 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- June 16 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- June 16 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- June 21 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Info: David Rossing, MD, 331-3490.
- June 21 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- June 21 **Geriatric Forum** - 7:00 am, RDT Network Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- June 22 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- June 22 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
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- June 23 **Tumor Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- June 26 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145
- June 28 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- June 28 & 29 **ACLS Provider** - 14.66 hours Cat. 1, McKennan Hospital, Sioux Falls; Info: K. Miles, 339-8096.
- June 28 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- June 29 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- June 29 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- June 29 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.

June 30

Physicians Continuing Education - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.

MISCELLANEOUS

JUNE 1995

- June 1 **Agricultural Medicine: Caring For Farm Families**, Holiday Inn East, St. Paul, MN. Fee: \$110. 6.75 hrs AMA Category 1 credits. Contact: Midwest Center for Occupational Health & Safety, Univ of MN, 640 Jackson St, St. Paul, MN 55101. Phone: (612) 221-3992.
- June 12-13 **Emergency and Critical Care Conference**, Village East Resort, Spirit Lake, Iowa. Contact: Barb Wagley (605) 357-1340, Sioux Falls, SD.
- June 21-23 **18th Annual Black Hills Seminar: Advances in Clinical Pediatrics**, Rushmore Plaza Holiday Inn, Rapid City, SD. AMA Category 1 credit avail. Contact: Lawrence R. Wellman, MD or Joan Bevers, USDSM, 1100 S Euclid Ave, Box 5039, Sioux Falls, SD 57117-5039. Phone: (605) 333-7178.

JULY 1995

- July 2-4 **25th Annual Sports Medicine Symposium**, Sheraton Hotel, Atlantic Beach, NC. Fee: \$85. 6.5 hrs AMA Category 1 credit. Contact: NC Med Society, PO Box 27167, Raleigh, NC 27611.
- July 22 **Anatomy and Arthroplasty**, Mayo Med Ctr, Rochester, MN. Fee: \$200. 8.5 hrs AMA Category 1 credit. Contact: Rita Kunz, Postgraduate Courses, Mayo Foundation, Rochester, MN 55905. Phone: (507) 284-2509.
- July 25-28 **2nd Annual Pan Pacific Lymphoma Conference**, Ritz Carlton Kapalua, Maui, HI. Fee: \$450. AMA Category 1 credit avail. Contact: Ctr for Cont Educ, Univ of NE Med Ctr, 600 S 42nd St, Omaha, NE 68189-5651. Phone: (800) 642-1095.
- July 26-27 **4th Annual Current Concepts in Sub-Acute Care**, Marriott Hotel, Omaha, NE. AMA Category 1 credit avail. Contact: Sally C. O'Neill, Ph.D, Assoc Dean, Creighton Univ CME Div, 601 N 30th St, Suite #2130, Omaha, NE 68131. Phone: (800) 548-2633.

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President's Page



**Mary S. Carpenter, MD, President
South Dakota State Medical Association**

As June 1995 has crept closer and closer, I have had increasing dread of the first deadline for the President's Page in the Journal. Now that the deadline has come, I hoped that like so many things, the worry and anticipation would be worse than the actual task. Unfortunately, in this case, the worry has been well-founded. I hope that as the year progresses this will become easier. It also occurs to me that if it is the most difficult job that I have this year things won't be all bad.

This past week I have had almost daily letters and faxes from the AMA regarding the pending vote in the Senate on product liability reform and the associated amendment about a cap on non-economic damages for medical malpractice. Again the medical profession is involved in the political arena to try to improve our ability to provide quality health care. By the time this is actually printed, this particular issue will be old news. Whatever happens in Congress in the next few weeks, we will continue to promote legislation that we think is in the best interests of our patients. The issue, however, is that we must be involved in the political process so that, with information from the medical community, good legislation will be the outcome.

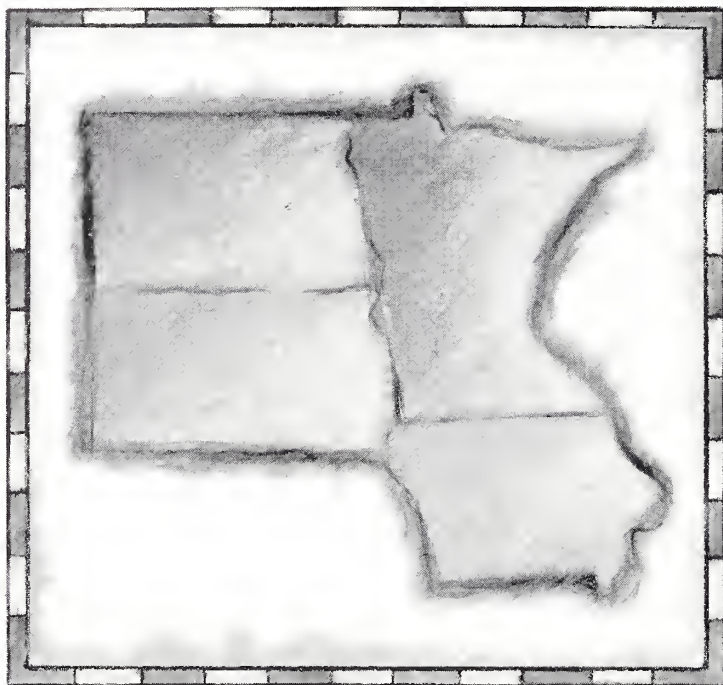
Over the first four months of 1995 the importance of politics to medicine has been reinforced to all of us. The need for physicians of this state to be acutely aware of legislation affecting both health care delivery and us as health care providers is obvious. What is not always

as obvious is the best way to participate effectively in that arena. I believe that in the coming years it will be very important for us to learn that skill. I recently was sent an article by a consultant to state medical societies instructing them on how to have a positive and successful legislative year. He stressed the importance of early planning and the absolute necessity of prioritizing your agenda. I think that the leaders of the Association and the Legislation Commission have followed these suggestions well in the past, and I hope that we can continue successful legislative ventures in the future. Another important issue for political success, as in almost everything, is money. I would really like to encourage everyone to be involved in SoDaPAC, both with your membership and with your personal involvement on the SoDaPAC Board.

I am looking forward to this next year (all except the next eleven deadlines for this page). I am very honored to have the opportunity to serve as your President, especially as the first woman to hold this office. Dr Reynolds has done an outstanding job this past year. I would also like to thank him in advance for all the help I will ask of him in the next year. I congratulate him on his hard work and fine leadership. Thank you, Jim!

A handwritten signature in dark ink that reads "Mary Carpenter MD". The signature is written in a cursive style with a large, looping "M" and "C". Below the signature is a horizontal line.

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Gaining Perspective

Last semester, a colleague and I taught a master's level seminar which focused on contemporary ethical issues in health care. One of the books we chose to discuss was Daniel Callahan's treatise work, *The Troubled Dream of Life*. As in his previous works, Callahan very insightfully reflects on the presumptions and limitations of illness care. In this current book, Callahan analyzes the attitudes of society and medicine toward the dying patient. Specifically, he reflects on how difficult it has become for many individuals in society and for physicians to accept death. He describes how oftentimes, in our world of high technology and expected intervention, patients die a "wild death". By this he means that patients frequently end their days in a setting of intensive medical interventions. Frequently, as organ systems fail, the patient is virtually compartmentalized into numerous realms of battle. Since it is often difficult for the physician to give up treatment, especially if there is at least some chance of recovery, technology marches onward. Callahan notes, in essence, that continued aggressive treatment may be justified, for instance, by a 5% chance that refractory heart failure can be reversed. While the cardiologist is making that assessment, the nephrologist may simultaneously be recognizing a slim but possible chance that progressive renal failure may improve to the point of avoiding long term dialysis. And of course, other organ systems may have still other percentages of likelihood for some improvement being effected. In the course of compartmentalizing the patient and continuing to justify aggressive treatment, patients are often committed to aggressive interventions that are sustained until death. Frequently healthcare providers and the public view this application of aggressive intervention as an almost heroic fight against the ravages of death. It is seen in the light of Dylan Thomas' plea to his father to "rage, rage against the dying of the light".¹

What Callahan asserts, and what I think many physicians, families and patients experience, is that these vigorous therapies frequently result in the type of "wild death" which Callahan contrasts with the "peaceful death" that many yearn for. In the course of his discussion, Callahan points out how incredibly difficult it is to "draw the line". How can one know for sure that a given treatment won't be of some benefit and perhaps help "turn things around" for a patient near death? In reading him, I was struck by how much easier it is, at least on the face of it, to continue to apply aggressive treatment rather than to make the difficult judgment that "enough is enough" and that caring measures only should be used. In this regard, it is particularly interesting how some religious groups have come to equate maximal medical/technical intervention as always being

in the service of reverence for life and thus mandated. Callahan, in response to this notion, contends that such attitudes risk brutalizing the dying experience, while achieving very little for patients or society.

As part of his reflections, Callahan looks back to earlier centuries when both the medical profession and society were able to more realistically view death as part of the natural order of things. Too often in today's world, we seem willing to do virtually anything to stave off inevitable, and perhaps timely, death. He points out how little time is spent in medical education actually teaching about the dying process and optimal care methods. We are much more attuned to the fray of medical intervention, even as its ultimate futility becomes clearly manifest.

In my judgment, Callahan is in no way impugning a reverence for life. However, he very effectively makes the case that we would often function better as a society and as a medical profession if we could explicitly recognize the point where preparation for impending death makes more sense than a continued fight against the dying process.

At the time I was reading Callahan and discussing his thoughts with my students, I was able to test Callahan's perspective with a particular patient and family. While I will change the specific facts to protect the patient's anonymity, let me suggest that the patient was a 40 year old man with end stage AIDS. He had been functioning fairly well at home, and then had had a precipitous decline from what proved to be multiple enhancing lesions in his brain. A biopsy was inconclusive as to whether he had multiple areas of malignancy (lymphoma) or some type of abscesses. In any event, it seemed to me, as a detached observer, that he could not survive very long regardless of what was done. The patient's encephalopathy rendered him beyond participating in treatment decisions. As seems to frequently be the case, his loving family seemed very reluctant to "give up" and "do nothing". Thus, for a number of weeks, he was treated with IV antibiotics, parenteral feeding, and aggressive pulmonary interventions.

It appears to me that this patient is an excellent example of what Callahan is talking about. Various aspects of his illness were potentially treatable, at least in some fashion. His brain abscesses could, in theory, have shrunk with the right antibiotics. If he had CNS lymphoma, this might temporarily have been slowed down with radiation therapy. Since he was not eating effectively, and aspirating frequently, enteral feedings could certainly have helped to sustain him longer. And yet, I wonder if all of these interventions weren't, in

essence, the trappings of a "wild death" as characterized by Callahan. Clearly, at least in my perception, this patient was going to die within weeks, or possibly a month or two. His quality of life had become severely impaired. It seems that one could make a strong and compassionate argument for comfort measures only. Certainly Callahan would. With no antibiotics and only the limited oral feedings that he could have tolerated, I suppose he might have lapsed into coma and died within a week. As it was, he survived in the hospital, with aggressive medical treatment, for some five weeks.

Regardless of when death comes, it is a savage indignity for the patient's loved ones and inevitably prompts feelings of failure among caregivers. However, this circumstance should not prompt caregivers to either implicitly or explicitly fail to accept the reality of inevitable death. As caregivers, we must always feel a mandate for compassionate and loving comfort measures. Callahan's perspective lends support and credence to this perspective.

Recently, one of my colleagues inadvertently described a terminal patient as "gasping for death" when he meant to say "gasping for breath". This verbal slip was apropos to the patient's dire condition and impending demise. As caregivers, we must vigilantly strive to avoid the type of "wild death" we know is possible. If we fail, we may inadvertently be sentencing our patients to "gasping for death" as they end their lives.

Jerome W. Freeman, MD
Editor

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Botulinum Toxin - A Therapy For Dystonia

William R. Rossing, MD and John C. Jones, MD

In the United States, over 80,000 people suffer from some form of focal dystonia. Dystonia is defined as a syndrome of disordered muscle tone associated with sustained co-contraction of agonist and/or antagonist muscles, which leads to limb or body twisting, repetitive movement and sustained abnormal posture. Dystonia may be associated with tremor and/or spasms and may develop spontaneously or present after a traumatic bodily injury. Incorrect or inaccurate diagnosis is not uncommon as dystonia remains poorly recognized and misunderstood from an etiologic viewpoint. Its presentation also can be quite subtle. The most common presentations of dystonia in the adult population are spasmodic torticollis, facial blepharospasm, limb dystonias (such as writer's cramp) and spasmodic dysphonia.¹

The presumed etiology of dystonia is a central disturbance of basal ganglia function leading to a local or generalized impairment of muscle tone and contraction. This condition is often genetically mediated in autosomal dominant fashion and is linked to an abnormal dystonia gene on chromosome 9q (short arm of 9). Because of incomplete penetrance and sporadic cases, the pattern of inheritance may be subtle or inapparent.

Historically, the treatment of dystonia has centered on muscle relaxing agents (such as benzodiazepines), L-dopa, high dose anticholinergics, various surgical procedures and biofeedback techniques. Overall, the response to these treatments has been largely unsatisfactory. More recently, the use of periodic injections of Botulinum Toxin Type A has proven to be a very successful treatment for many types of focal dystonia.²

Botulinum Toxin Type A (Botox[®]) is a biological toxin produced by *Clostridium botulinum*. The toxin is now purified and mass marketed by Allergan, Inc. A company in England also has a formulation of botulinum toxin, but this is not currently available in the United States. Pharmacologically, the toxin is a dipeptide molecule consisting of a heavy and light chain bound by a disulfide bond. Its molecular weight is approximately 150,000 daltons. The heavy chain peptide is responsible for binding to the presynaptic nerve

terminal, while the light chain enters the terminal via endocytosis and inhibits acetylcholine release.³ This produces a protracted chemodenervation when injected locally into a muscle. The desired effect of localized muscle paralysis and atrophy helps to peripherally inhibit dystonic muscle contractions, thus decreasing symptoms of dystonia, such as pain, cramping and disfigurement.

Botulinum toxin is available in vials containing 100 mouse units of toxin. The toxin is reconstituted in nonbacteriostatic normal saline and subsequently injected into desired muscles. EMG guidance is frequently used to help more exactly direct the toxin delivery in the region of the motor endplate (this is felt to enhance the efficacy and duration of action of toxin, as well as to diminish unwanted side effects). The average duration of symptom relief for spasmodic torticollis is 3 to 4 months.⁴ Symptom relief may be achieved for 6 or more months when treating facial spasm or blepharospasm. Overall, the clinical response and duration of action is somewhat variable from patient to patient, and is dependent on size or bulk of muscle injected and muscle location. Over several years the efficacy can be maintained by repeated injections, though there is the potential for primary or secondary immune formation to the toxin. In some patients, antibody formation to the toxin may decrease the efficacy of botulinum toxin but this is felt to be less likely to occur if injections are spaced as infrequently as possible. Additionally, there are several other types of botulinum toxin currently under investigation. One of these types may bridge the problem of antibody formation to botulinum toxin if it occurs.

The FDA currently labels the use of botulinum toxin for the treatment of strabismus, blepharospasm and hemifacial spasm. Other well accepted indications for botulinum toxin use include treatment of spasmodic torticollis, limb and oromandibular dystonia and laryngeal dystonia.⁵ Additional useful applications for botulinum toxin include the treatment of evolving spasticity in patients with various central neurologic disorders, strabismus, sialorrhea and sphincter tone dyssynergia.

Botulinum toxin treatment of dystonia is highly effective. Between 85% to 90% of patients who receive appropriate treatment may achieve significant improvement, thus reducing pain, disability and disfigurement. Unfortunately, botulinum toxin is an expensive treatment as the toxin costs between \$300 to \$400 per vial (100 mouse units). A routine torticollis case may require 200 to 300 units of toxin, thus generating a potential toxin expense of between \$600 to \$1200. However, independent studies are being done to verify the cost effectiveness of the treatment when considering loss of productivity and the use of other medical/surgical treatments for dystonia. Botulinum toxin treatment is covered by most major insurance carriers and by Medicare for labeled indications.

The side effects associated with botulinum toxin treatments are few. Some patients may develop transient neck weakness or dysphagia when treated for torticollis. Occasionally, transient ptosis or dry eye is reported from patients treated for facial and blepharospasm.⁶ Otherwise, no side effects are routinely experienced. Potential contraindications to botulinum toxin treatments include concurrent motor neuron disease, myasthenia gravis, Eaton-Lambert syndrome, use of aminoglycoside antibiotics and pregnancy.³

Botulinum toxin is an excellent treatment for a variety of dystonic disorders. Patients receiving treatment have a high probability of gaining significant

clinical improvement and reduction of disability. However, it should be noted that botulinum toxin is not curative for dystonia but rather palliates the symptoms of this disorder for prolonged periods of time. With this advance, patients achieve substantial clinical improvement and the future may hold even more specific treatments for dystonic conditions.

AUTHORS

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John C. Jones, MD is Assistant Professor of Neurology and Internal Medicine, University of Wisconsin, Madison, WI.

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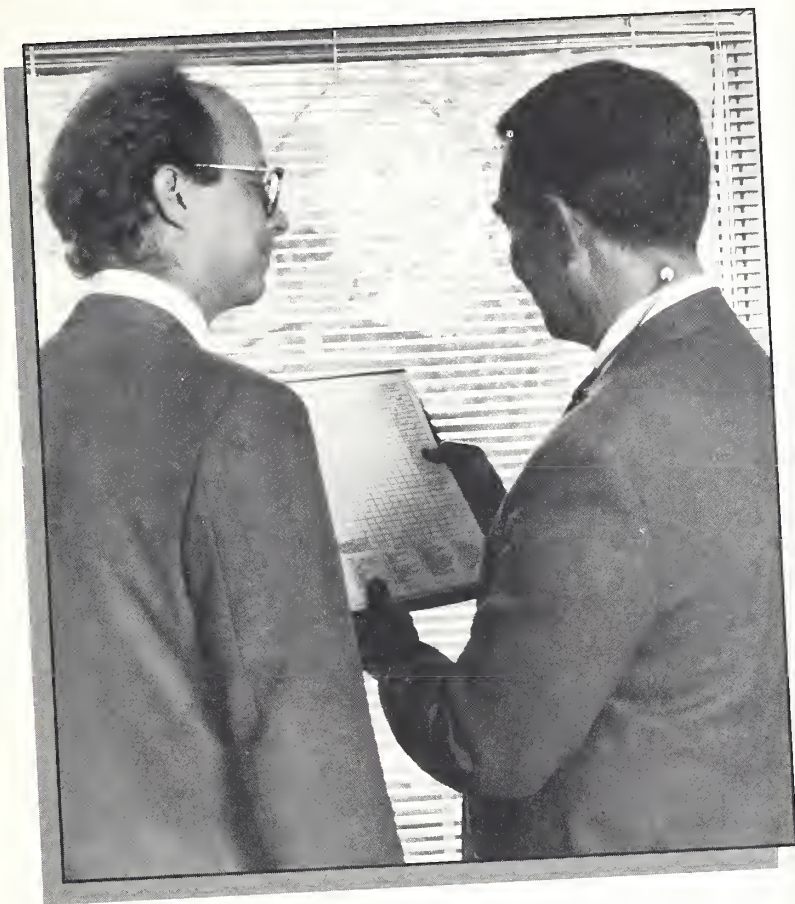
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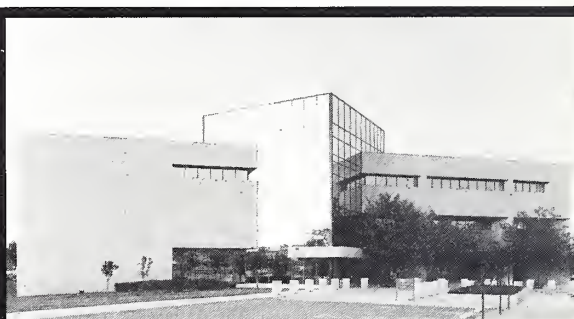
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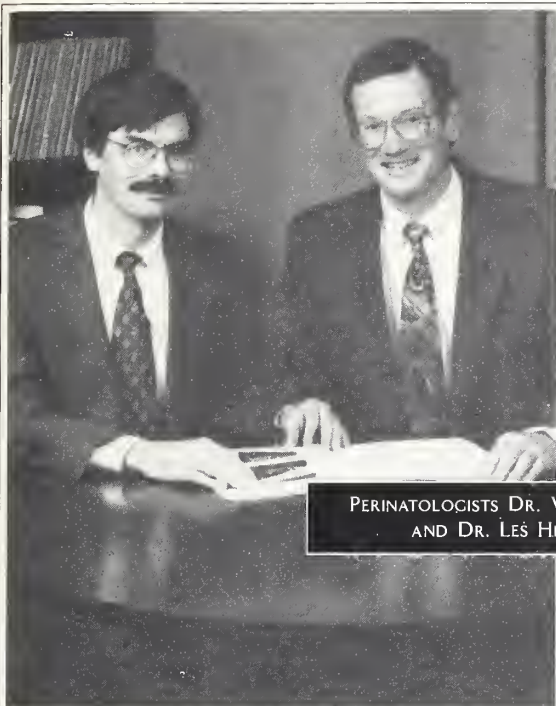
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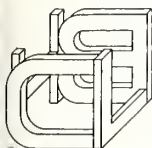
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**Susan Tjarks, President, South Dakota
State Medical Association Alliance**

It is with not just a little fear and trepidation that I commence writing this article. When I agreed to serve as the 1995-96 President of the South Dakota State Medical Alliance (just a little over a year ago), there were many facets of the "job" that definitely appealed to me. First of all, I am, by nature, quite a social creature, so the thought of having the opportunity to "socialize" with physician spouses from across the state was very enticing. I am also a big believer in the Medical Alliance and feel truly devoted to the many worthwhile causes it addresses. I felt it was quite an honor to serve in this capacity—President of the oldest continuous Medical Association Alliance in the United States.

And then someone dropped the bomb shell.

"Oh, and by the way, you will need to write a monthly article for the South Dakota Journal of Medicine! These will be "due" by the 10th of the month preceding the month they are to be printed."

WHAT????? Whoa. Stop right there. I mean, it's not that I have nothing to say. In fact, I've been known to be quite verbose at times, and quite opinionated, I might add. It's just that... well, you really are a very esteemed audience. I just wonder what it is that I might have to say that would be worthy of a few moments of your precious time to read.

Actually, let me tell you the real problem. I can't see your faces. I would find this a much simpler task if I had a group of you sitting in front of me so that I could read your expressions as I speak and search out your reactions to what it is I am saying. But, of course, that's

not possible...or is it? It occurs to me that I do know many of you on a personal level. In fact, the person whom I love and adore more than any other in this world is among your ranks. (That would be my dear husband, Brian, in case you are wondering). And rarely do I write anything that will be seen or heard by more than a handful of close personal friends, that I do not read to him for proofing, editing and reacting.

I have an idea. For the next year, could we just call this the "Dear Doctor" column? I will write letters to my own dear husband who just happens to also be my favorite South Dakota physician. While I will try to refrain from saying anything too mushy or calling him by any "pet names" like snookums and honeybuns, I will tell him (along with all of the rest of you wonderful doctors out there) the things that I've been thinking about and consider to be important or at least news worthy. I will attempt to make my remarks reflective of the sentiments shared by most, if not all, "physician spouses".

This won't be so bad. Heaven knows I have plenty of things I'd love to discuss at length with Brian, but the time just doesn't always seem to be there.

So, for my first message. This is the most important thing that I think you should know.

Dear Doctor,

I want to take this opportunity to let you know how much I appreciate the sacrifices you make to be a physician. I know it isn't always easy. I see you come home at nights after a long day in the clinic, anxious for a few moments of relaxation, or maybe time to enjoy the kids, (or me, for that matter!). It doesn't seem like too much to ask. You've put in a full day of listening, helping, responding and caring. A few minutes for you should just be a given. But, almost without fail, just as you are beginning to settle in, just as you sit down to have your supper, or just as the kids are talking a hundred miles an hour about this, that and the other, the phone rings. And, true to form, you answer it in a kind, considerate manner, and it amazes me that you are able to put your own needs away and respond to the person on the other end of the line in such a compassionate way.

I know that the world of medicine is changing daily, and sometimes it seems like the opportunities to just practice medicine the way you want to are diminishing, while the constant threat of government control and red tape loom ever present. But please don't let those things detract from the good that you accomplish every day. You must focus on the positive impact that you make in people's lives. I know it is happening. You have no idea how many times I am approached at the store, or the school, or wherever I happen to be, and people tell me how you helped them, or their child, or their parent...I am proud of you. You are my HERO! Fondly,

Susan Tjarks

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Physicians, medical students and residents who have recently joined the South Dakota State Medical Association.

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Murlin Paul Merryman, MD, 87, Rapid City, died December 22, 1994. He was born in 1907 in Hamilton, Missouri. He graduated from the University of Missouri with BA and BS degrees in medicine. In 1934, he earned his MD from the University of Louisville in Kentucky. He completed his internship and residency at Louisville City Hospital. In 1938, he moved to Rapid City to practice medicine. He joined the military in 1942 and was discharged as a major in 1946. He practiced medicine in Rapid City until his retirement.

Robert F. Branch, MD, 75, Rapid City, died December 29, 1994. He was born in 1919, in Escanaba, Michigan. He attended Wheaton College in Illinois and earned his MD degree at Loyola Medical School in Chicago. After 18 months overseas in the service, from 1944 to 1946, he returned to complete a residency in anesthesiology at Reading Hospital, Reading, Pennsylvania. He practiced in Homewood, Illinois for 23 years, from 1950 to 1973. He and his wife moved to Rapid City in 1973, where he joined the Rapid City Regional Hospital. He retired in

Edward T. Ruud, MD, 74, Rapid City, died January 11, 1995. He was born in 1920 in Alexandria, Minnesota. He received his BA degree from the University of North Dakota in 1940. He attended medical school at the University of North Dakota and at Temple University in Philadelphia. He served in the US Army from September 1944 until September 1946. He practiced medicine in Rapid City until 1975 and then moved to Hot Springs and practiced until his retirement in 1987.

Theodore Angelos, MD, 71, died March 15, 1995. He was born in 1923 in Ames, Iowa. He received a BS degree from Augustana College in Sioux Falls. He attended the University of South Dakota Medical School for two years and then went on to the University of Iowa where he received his medical degree in 1952. Dr Angelos completed a one year internship at the Edward W. Sparrow Hospital, Lansing, Michigan in 1953. He practiced medicine in Canton, South Dakota from 1953 to 1990.

Kendall Burns, MD, 76, died May 7, 1995, in Sioux Falls. He was born in 1919, in Balaton, Minnesota. He attended Augustana College from 1936 to 1940, and the University of South Dakota Medical School in Vermillion from 1940 to 1943. He received his medical degree from Temple University Medical School in Philadelphia, in 1945. He was a lieutenant in the Navy during World War II. He spent a year in general practice at Coal Mountain, West Virginia in 1949, and returned to Sioux Falls in 1952. He practiced surgery in Sioux Falls until his death.

Richard H. Reed, MD of Huron has been elected to membership in the Society of American Gastrointestinal Surgeons (SAGES). Dr Reed is a board certified general surgeon at the Huron Clinic. He also makes regular visits to the Hand County Memorial Hospital in Miller.

Dr Richard Wake, Brookings, has been chosen Family Doctor of the Year. The doctor of the year must be a member of the South Dakota Academy of Family Physicians, hold current recertification certificate from the American Board of Family Practice, serve on a hospital staff and "be of good moral quality and standing". Other criteria include teaching, publications, research, community, religious and family activities.

Dr Wake, a thoughtful and caring physician, originally wanted to become a minister, but discovered that his talents better fitted the medical profession. However, he recently combined his religious calling with his medical practice by taking his vacations as a missionary to the poor areas of Jamaica and treating people there.

Dr Wake completed his undergraduate studies at the University of South Dakota in Vermillion, in 1972, and then received his medical degree at the University of Minnesota in Minneapolis, in 1974. After completing a family practice residency at St. Paul Ramsey Hospital in 1977, he came to South Dakota and joined the Brookings Clinic. He and his wife, Carol, have three children, Paul, David and Laura.

Patricia Peters, MD, was one of six women who were honored at the 22nd YWCA Leaders Luncheon in Sioux Falls recently. Dr Peters obtained her medical degree in 1980 from the University of South Dakota School of Medicine and completed her internship in 1981. She joined the McGreevy Clinic as a family practice doctor in 1989 and was elected chief of staff at McKennan Hospital in Sioux Falls in 1992.

Mark Mabee, MD, a family practice and occupational medicine physician at the Yankton Medical Clinic, and **Victoria Herr, MD**, a pathologist at the Clinical Laboratory of the Black Hills, have both qualified as certified Medical Review Officers (MRO). The MRO is certified by the Medical Review Officer Certification Council (MROCC), an independent organization which conducts an extensive examination process to identify physicians with the highest professional standards of medical expertise and practical skills necessary to evaluate drug and alcohol tests in public and private sectors of the workplace. The MRO plays a key role in drug testing programs by verifying results prior to release. The members of the MROCC Board of Directors represents a variety of medical specialty societies including the AMA.

The following physicians have met the requirements of the American Academy of Family Practice and continue to be Board Certified Family Practice Physicians: **Drs Richard Honke and Phillip Barker**, Parkston; **Donna Small**, Britton; and **Buron Lindbloom**, Pierre.

Scott Eccarius, MD, has been appointed Associate Examiner by the American Board of Ophthalmology. As an associate examiner, Dr Eccarius will be hearing and judging the oral exams of candidates throughout the United States.

Tamara L. Poling, MD, has been notified by the directors of the American Board of Dermatology that she passed the certifying examination of that Board. She is associated with the Rapid City Medical Center in the dermatology department.

Rapid City physician, **Jose Teixeira, MD**, has been awarded certification as a Diplomate in Clinical Cardiac Electrophysiology from the American Board of Internal Medicine. Dr Teixeira is the first cardiologist/electrophysiologist in the state of South Dakota to receive this credential.

The Doc Hayes Award went to **Dr Robert Vosler** of Fort Meade during the 62nd annual National Doctors' Day ceremonies. Dr Vosler has served at the Fort Meade Veterans' Affairs Medical Center since 1985. He received his medical degree and internal medicine residency from the University of South Dakota, in 1981. He was board certified in internal medicine in 1986. He served as acting chief of medical services at the Fort Meade VAMC in 1993 and is now director of the intensive care unit.

At the 62nd annual National Doctors' Day ceremonies, retired physician, **Werner Klar, MD**, received special recognition for his many years of loyal service and leadership to the veterans and staff at Fort Meade. Dr Klar was born in Germany where he received his medical degree in 1945. He came to the United States

and completed an internship at Sioux Valley Hospital in Sioux Falls, in 1954.

South Dakota physicians who have been recently recertified as Diplomats of the American Board of Family Practice are: **Drs John B. Jones**, Chamberlain; **Carol Zielike** and **William Tschetter**, Rapid City; **Victoria E. Anderson**, Hot Springs; **Harland Hermann, Jr**, Sturgis; and **Tony L. Berg**, Winner.

Aberdeen urologist, **Dr Karl H. Kosse**, recently traveled to Haiti on a humanitarian mission. Haiti is the native country of Dr Kosses' wife, Betsy and they have visited there numerous times. The Kosses were invited by Aberdeen missionaries to accompany them to their mission in Haiti. For one week (5 working days), Dr Kosse, who was the only urologist in northern Haiti, performed 42 operations.

Dr William Cullis, family practice physician in Custer, has been presented with the title of South Dakota's Hospice Physician of the Year at a banquet in his honor. He is one of the volunteers who unselfishly gives of himself. He takes his profession seriously and is one of two physicians who is responsible for the caregiving at Custer Community Hospital, Family Healthcare Clinic, the programs for home health and emergency services. He is not only involved in the medical care of this community, he is also involved in many other volunteer services.

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Antimicrobial Resistance: Controlling the Problem

Dennis D. Hedge, Pharm.D, Sioux Falls, SD

Antibiotic resistance is a serious problem occurring with increasing frequency. Drug resistant strains of staphylococci, enterococci and pneumococci are a major concern because of a lack of alternative antimicrobial agents with activity against these organisms. The current situation with gram-negative organisms is probably less critical, but multidrug-resistant strains have been isolated.

Bacterial resistance to antimicrobial agents is mediated through a variety of mechanisms. Mechanisms of bacterial resistance include the production of enzymes which inactivate antibiotics, changes in membrane permeability which inhibit the access of antibiotics to target sites, expulsion of antibiotics via membrane "pumps", and alterations in antibiotic target sites.

The trends in antimicrobial resistance are best considered when bacteria are separated into nosocomial and community-acquired pathogens. Antimicrobial resistance has historically been considered a problem of hospitals, but antimicrobial resistance among community-acquired pathogens is increasing.

The most concerning resistance problems among nosocomial pathogens are seen with the staphylococci, enterococci and Gram-negative rods. Methicillin-resistant *Staphylococcus aureus* is a widespread organism which will become virtually untreatable if it acquires vancomycin resistance.¹ Enterococcus has already acquired vancomycin resistance, high-level aminoglycoside resistance and penicillin resistance making it untreatable in some hospitals.² Among the Gram-negative rods, multidrug-resistant strains of *Escherichia coli*, *Enterobacter*, *Klebsiella*, and *Pseudomonas* are being isolated more frequently.¹

In the community, the frequency of antimicrobial resistance to *Streptococcus pneumoniae*, *Neisseria gonorrhoeae* and *Mycobacterium tuberculosis* continues to increase. Pneumococci with high-level resistance to penicillin has been isolated in various parts of the world.^{3,4} These high-level penicillin resistant organisms are often resistant to multiple antibiotics and require treatment with vancomycin. *Neisseria gonorrhoeae* is often resistant to penicillin and tetracycline.¹ The emergence of extended spectrum beta-lactamase resistance in this organism would create a significant public health problem.

Multidrug-resistant tuberculosis has been an increasing health problem over the past few years. The reasons for the development of multidrug-resistant tuberculosis include non-compliance with drug therapy, poorly conceived drug therapy, immigration

and the HIV epidemic.^{5,6} Treatment of multidrug-resistant tuberculosis often requires the use of second-line agents which are less effective and/or not as well tolerated as first-line drugs.

In order to control antimicrobial resistance, infection control policies such as hand washing and patient isolation must be enforced. Antimicrobials must also be used judiciously. Avoiding prolonged antibiotic therapy and utilizing narrow spectrum antibiotics when susceptibility test results become available have been recommended.⁷ Another strategy is to develop guidelines for appropriate antimicrobial use. This strategy is very appealing for drugs which treat infections with few or no other therapeutic alternatives such as vancomycin. It is also extremely important to dose antimicrobial agents appropriately because of the correlation that exists between acquired resistance and antimicrobial concentrations below the MIC of an organism.⁷

We can no longer depend on the development of new antibiotics to solve the resistance problem. Microbial organisms are acquiring resistance to antimicrobials at a rate which exceeds the pace of antimicrobial development. Strategies must be developed and enforced which will limit antimicrobial resistance. If we fail to develop such strategies, many infectious diseases may soon become untreatable.

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Edited by Brian Kaatz, Pharm.D.





SOUTH DAKOTA GERIATRIC FORUM
USD School of Medicine

A SD RURAL HEALTH OUTREACH GRANT

The goal of the South Dakota Rural Health Outreach Grant is to improve the quality of care of elderly in our state and to provide education about treatable geriatric health problems to anyone involved in their care. Barriers to providing appropriate care will be looked for and eliminated, if possible.

Program Schedule

0700 MST

3rd Thursday of each month

June 15, 1995 - On the Road Again: Drivers Evaluation and Training for the Mature Driver, presented by Sheila Youngs from Occupational Therapy at Sioux Valley Hospital.

July 18, 1995 - Report from the National & State White House Conference on Aging presented by O. Myron Jerde, MD and Carla Leiferman.

Education credits will be given to MDs, Nursing, Nursing Home Administrators, Social Workers, American Academy of Family Practice and Pharmacy. No preregistration is necessary.

These programs will be broadcast on the Rural Development Telecommunications Network, at 0700 MST on the 3rd Thursday of each month. These sites are in the following locations: *Aberdeen* - Northern State University; *Brookings* - South Dakota State University; *Huron* - Huron University; *Madison* - Dakota State University; *Mitchell* - Mitchell Technical Institute; *Pierre* - State Capitol Building; *Rapid City* - Rapid City Regional Hospital; *Sioux Falls* - Sioux Valley Hospital; *Spearfish* - Black Hills State University; *Vermillion* - University of South Dakota; *Watertown* - Lake Area Technical Institute; *Yankton* - Human Services Center.

These programs are also broadcast to 37 satellite sites throughout South Dakota. Video tapes of the programs will be available at no charge upon request. Please contact the satellite site coordinator at your local high school for more information or contact Jane Yarbrough, Geriatric Program Coordinator at 605-394-6927.

South Dakota Rural Outreach Grant #93-912

CME Conferences

CME Conferences being held on a regular basis at various health care facilities throughout the state of South Dakota.
(1 hour AMA Category credit available unless otherwise specified)

CME CONFERENCES

JUNE 1995

- June 15 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- June 15 **Neuroscience Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- June 15 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- June 15 & 16 **ACLS Provider** - 14.66 hours Cat. 1, McKennan Hospital, Sioux Falls; Info: K. Miles, 339-8096.
- June 16 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Speaker: Henry A. Nasrallah, MD; Topic: Neurobiology & Psychopharmacology of Schizophrenia: An Update; Info: Dougals J. Soule, PhD - 339-6785.
- June 20 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- June 20 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- June 21 **Geriatric Forum** - 7:30 am, East Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- June 21 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, to be announced, to be announced, Info: David Rossing, MD 331-3490.
- June 21 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Clinical Pathology Conference, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- June 22 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- June 22 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- June 22 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- June 23 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145.
- June 23 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145.
- June 26 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145.
- June 27 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- June 28 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- June 28 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- June 29 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- June 29 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.

JULY 1995

- July 5 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: Dennis Hedges, PhD, Topic: Antibiotics, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- July 6 **Clinical Pathology Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: to be announced, Topic: to be announced, Info: Dr's J. Ruggles & R. Thompson, 665-9002.
- July 6 **Biomedical Ethics** - East Auditorium, Rapid City Regional Hospital, Info: Medical Staff Office - 341-8705.
- July 6 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- July 6 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- July 7 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- July 10 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145.
- July 11 **CPR Certification/Recertification** - 7-10:00 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- July 11 **Breast Cancer Conference** - 12:00 noon, Meeting Room B, Sioux Valley Hospital, Info: Dr. Thomas Cink - 333-5244.
- July 12 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- July 12 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- July 12 **Dermatopathology Conference** - 7:30 am, Sioux Valley Hospital Pathology Conference Room 1513, Info: Joan, 333-1730.
- July 13 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- July 13 **Cardiac Cath Conference** - 7:30 a.m., McKennan Hospital Auditorium, Info: Cardiopulmonary Dept, 339-8171.
- July 13 **Internal Medicine, Tumor Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: To be announced, Topic: To be announced, Info: Dr. J. Ruggles & Dr. R. Thompson, 665-9002.
- July 13 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- July 14 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: Donna Sweet MD, Topic: HIV Medicine Management: A Case Study; Info: Dr. Brian T. Hurley - 357-1366 (Barb).
- July 18 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- July 19 **Geriatric Forum** - 7:30 am, East Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- July 19 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Clinical Pathology Conference, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).

- July 19 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, to be announced, to be announced, Info: David Rossing, MD 331-3490.
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- July 24 **Tumor Board** - 8:00 am, Fort Meade VA. Info: Surgical Section, 347-7145.

MISCELLANEOUS

JULY 1995

- July 18-22 **Annual Meeting—American Association of Clinical Anatomists/British Association of Clinical Anatomists**, Mayo Med Ctr, Rochester, Minn. AMA Category 1 credit avail. Contact: Barbara Porter, Postgrad Courses, Section of CME, Mayo Foundation, Rochester, MN 55905. Phone: (507) 284-0026.
- July 22 **Heart Disease and The Athlete: Diagnosis, Screening and Evaluation of the Athlete with Heart Disease**, Henry Doorly Zoo, Omaha, Neb. AMA Category 1 credit avail. Contact: Sally C. O'Neill, Ph.D, Assoc Dean, Creighton Univ CME Div, 601 N 30th St, Suite #2130, Omaha, NE 68131. Phone: (800) 548-2633.
- July 26-27 **Fourth Annual: Current Concepts in Sub-Acute Care**, Marriott Hotel, Omaha, Neb. AMA Category 1 credit avail. Contact: Sally C. O'Neill, Ph.D, Assoc Dean, Creighton Univ CME Div, 601 N 30th St, Suite #2130, Omaha, NE 68131. Phone: (800) 548-2633.

AUGUST 1995

- August 11-13 **Family Medicine Update**, Cheyenne Wyo. AMA Category 1 credit avail. Contact: Sally C. O'Neill, Ph.D, Assoc Dean, Creighton Univ CME Div, 601 N 30th St, Suite #2130, Omaha, NE 68131. Phone: (800) 548-2633.
- August 18-19 **Advanced Life Support in Obstetrics**, Grand Hotel, Bloomington, Minn. AMA Category 1 credit avail. Contact: Hennepin County Med Ctr, Off of Academic Affairs, 701 Park Ave, Mail Code 869-A, Minneapolis, MN 55415-1829. Phone: (612) 347-2075.
- Aug 21-Sept 1 **13th Annual Occupational Health & Safety Institute**, St. Paul-Ramsey Med Center, St. Paul, Minn. 20-30 hrs/course (14 courses) AMA Category 1 credit. Contact: CME, St. Paul-Ramsey Med Ctr, 640 Jackson St, St. Paul, MN 55101. Phone: (612) 221-3992.
- August 24-27 **International Symposium on Radioiodine**, Mayo Clinic, Rochester, MN. AMA Category 1 credit avail. Contact: Postgrad Courses, Sec of International Med Educ, Rochester, MN 55905. Phone: (800) 323-2688.
- Aug 30-Sept 2 **The Role of Echocardiography in Cardiac Surgery 1995**, Missoula, Montana. Fee: \$580-ACC members. 26 hrs AMA Category 1 credit. Contact: Am Coll of Cardiology, Extramural Prog, Peggy Sgro, 9111 Old Georgetown Rd, Bethesda, MD 20814-1699. Phone: (800) 257-4739.

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President's Page



**Mary S. Carpenter, MD, President
South Dakota State Medical Association**

As I am writing this month's page for the Journal, we have reached the midpoint of the Annual Meeting of the AMA in Chicago. There is no question that the main concern of everyone here is the future of Medicare. Dr McAfee's opening address, many of the resolutions, and a good share of the conversations are focused on that issue. The House of Delegates was addressed by Speaker Gingrich over remote TV today. I would like to share with you some of what he said. However the most interesting aspect may be what has changed and what has been done in the five weeks from my writing this and your reading it.

Speaker Gingrich first acknowledged the work drafted by the AMA Leadership called "Transforming Medicare" which was just finished June 14, 1995. In that document the AMA outlined their suggestions for improving the Medicare system. Representative Gingrich also stated that the Republicans have asked for input from the AARP, the AHA, etc, so that they will be able to work with as many ideas as possible. He made clear that in the GOP plan the per person, per year Medicare expenditure will increase (not decrease) from \$4800 in 1995 to \$6400 in the next seven years. This increase in spending is expected to come from making the system more efficient and more competitive. The suggestion is to offer each recipient several options from which to choose. The present system would be preserved for those who feel comfortable with that. However, patients would also be offered choices including medi-

cal savings accounts, a voucher system to purchase private insurance or to stay with a group plan that they had while employed, or a benefit payment plan in which recipients would have payment for services at a certain rate but would be free to choose their own provider and accept the responsibility to pay any remaining charges.

The prediction is that Medicare will be broke by the year 2002 without immediate changes. The two options to prevent that from happening are: 1. increase the payments to Medicare from the people presently in the workforce (increase taxes) or 2. change the system while preserving quality care. I think that this is a real opportunity to find a real solution and not a political quick fix. This solution must focus on savings and not on continued cuts in reimbursements forcing cost shifting and a compounding of the problem. This solution must also leave medical decision-making in the hands of physicians and their patients, and not bureaucrats. Patients must be in control of the resources to encourage them to make sure that they receive the best value for their health care dollar.

I think that we have an unique opportunity to help shape the future of health care. The decisions for its future will be made legislatively, but it seems that the legislators might be willing to listen to those of us who deal with this issue daily. Please share your thoughts and ideas with the leadership of the Association and with your Senators and Congressman. Hopefully we can see the development of a system that meets the goals of efficiency and quality.



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Program Schedule

0700 MST

3rd Thursday of each month

July 20, 1995 - "Report from the National & State White House Conference." This program will be presented by O. Myron Jerde, MD, Assistant Dean, USD School of Medicine and Carla Leiferman, Dept of Social Services.

August 17, 1995 - "Homeward Bound." Presented by Bruce Lushbough, MD and Sandy Rhody, PA, from the Estelline Medical Clinic.

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South Dakota Rural Outreach Grant #93-912

VRE—A More Immediate Threat Than Ebola

I do not want to underestimate the potential of epidemic hemorrhagic fevers caused by the Ebola, Marburg or Lassa viruses, but I would like to call attention to a very serious challenge—vancomycin resistant enterococcus or, perhaps a better term, multiresistant enterococci (VRE or MRE). I will not touch upon other similar equally serious developing resistant organisms such as *Streptococcus pneumoniae* (pneumococcus), staphylococci and extended spectrum resistant *E. coli* and *Klebsiella* in this discussion.

Traditionally, although enterococci are somewhat intrinsically resistant to penicillin/ampicillin (P/A), these drugs have been useful in areas like the urinary tract where high concentrations of drug can be achieved. In systemic infections, P/A in combinations with aminoglycoside has been synergistic.

In the 1980's high level aminoglycoside resistant (HLAR) strains of enterococci appeared in two forms—gentamicin resistant and streptomycin resistant. This plasmid mediated resistance obviated the synergistic activity of the aminoglycoside and P/A combination against enterococci. To add to the problem more recently, strains highly resistant to P/A have been reported due to altered penicillin binding proteins and rarely beta lactamase production.

As enterococci are resistant to cephalosporins, vancomycin has become the drug of choice for enterococci in resistant strains described above or in patients with nonresistant enterococcal infection but allergic to P/A. Unfortunately, in the last few years VRE have been rapidly spreading across the USA from East to West.

There are three forms of vancomycin resistance:

1. Van A resistance is high level resistance to vancomycin and a second glycopeptide antimicrobial agent, teicoplanin.
2. Van B strains have moderate to high resistance to vancomycin and only slight resistance to teicoplanin.
3. Van C resistance is an intrinsic moderate resistance to both vancomycin and teicoplanin seen in two species rarely isolated from humans—*Enterococcus gallinarum* and *Enterococcus casseliflavus*. Van A resistance is plasmid mediated and Van B and Van C are chromosomally mediated.

The antimicrobial susceptibility of enterococci to other antimicrobial drugs is variable and cannot be predicted accurately with certain drugs (TMP/SMX). The most commonly isolated enterococcus is *E. faecalis* and the second most common is *E. faecium* which tends particularly to have multi-resistant strains.

Since enterococci are part of the normal flora of the gastrointestinal tract and female genital tract of many individuals and can be transmitted between patients by direct contact or via health care personnel or contaminated equipment, HICPAC (Hospital Infection Control Advisory Committee) under the auspices of the Center for Disease Control (CDC) has published recommendations for preventing the spread of VRE which has been reported to have reached a rate of 8% especially in intensive care units. These include:

I. Prudent use of vancomycin

A. Situations in which vancomycin is appropriate or acceptable:

1. For treatment of serious infection due to *B*-lactam-resistant gram-positive microorganisms. Clinicians should be aware that vancomycin may be less rapidly bactericidal than *B*-lactam-agents for *B*-lactam-susceptible staphylococci.
2. For treatment of infections due to gram-positive microorganisms in patients with serious allergy to *B*-lactam antimicrobials.
3. When antibiotic-associated colitis (AAC) fails to respond to metronidazole therapy or if AAC is severe and potentially life-threatening.
4. Prophylaxis, as recommended by the American Heart Association, for endocarditis following certain procedures in patients at high risk for endocarditis.
5. Prophylaxis for major surgical procedures involving implantation of prosthetic materials or devices, e.g., cardiac and vascular procedures and total hip replacement, at institutions with a high rate of infections due to *S. epidermidis*. A single dose administered immediately before surgery is sufficient unless the procedure lasts more than 6 hours, in which case the dose should be repeated. Prophylaxis should be discontinued after a maximum of two doses.

B. Situations in which the use of vancomycin should be discouraged:

1. Routine surgical prophylaxis other than in a patient with life-threatening allergy to *B*-lactam antibiotics.
2. Empiric antimicrobial therapy for a febrile neutropenic patient, unless there is strong evidence at the outset that the patient has an infection due to gram-positive microor-

ganisms (e.g., inflamed exit site of Hickman catheter), and the prevalence of infections due to MRSA in the hospital is substantial.

3. Treatment in response to a single blood culture positive for coagulase-negative staphylococcus, if other blood cultures drawn in the same time frame are negative, i.e., if contamination of the blood culture is likely. Because contamination of blood cultures with skin flora, e.g., *S. epidermidis*, may cause vancomycin to be inappropriately administered to patients, phlebotomists and other personnel who obtain blood cultures should be trained properly to minimize microbial contamination of specimens.
4. Continued empiric use for presumed infections in patients whose cultures are negative for *B*-lactam-resistant gram-positive microorganisms.
5. Systemic or local (e.g., antibiotic lock) prophylaxis for infection or colonization of indwelling central or peripheral intravascular catheters.
6. Selective decontamination of the digestive tract.
7. Eradication of MRSA (multiply resistant *Staphylococcus aureus*) colonization.
8. Primary treatment of AAC.
9. Routine prophylaxis for very low-birth-weight infants.
10. Routine prophylaxis for patients on continuous ambulatory peritoneal dialysis or hemodialysis.
11. Treatment (chosen for dosing convenience) of infections due to *B*-lactam-sensitive gram-positive microorganisms in patients with renal failure.
12. Use of vancomycin solution for topical application or irrigation.

II. Education program for all appropriate medical personnel.

III. Role of the microbiology laboratory in the detection, reporting and control of VRE:

- A. Identification of enterococci particularly *E. faecalis* and *E. faecium* but occasionally other rare species. It should be noted other organisms such as *Pediococcus* and *Leuconostoc* may be confused with VRE.
- B. Antimicrobial susceptibility testing. Inaccurate results from instruments performing automated susceptibility testing has been reported.
- C. Measures to confirm resistance and screening procedures for detecting VRE in hospitals where VRE have not been detected and monitoring for VRE in clinical isolates

and stools or rectal swabs (see reference 2 for complete text).

IV. Prevention and control of nosocomial transmission of VRE.

This is a difficult multidisciplinary approach which is becoming increasingly necessary for VRE and other resistant organisms and demands significant cooperation from the medical staff.

A. For all hospitals including those where VRE have been isolated infrequently or not at all:

Notification of clinical staff so that appropriate education, monitoring and infection control procedures are instituted to prevent spread. Isolation precautions with single rooms, gown, glove use and care, cleaning and disinfection of equipment to limit spread are necessary.

Other facilities must be informed of discharge of carriers of VRE infected or colonized patients to their institutions.

I refer you to complete treatise in the references. However, this is a problem that must be addressed in all hospitals now. The fear that vancomycin resistance may spread to *Staphylococcus aureus* and *epidermidis* is even a more sobering possibility.

J. F. Barlow, MD
Editor

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Ethics of Alternative Therapies

Cliff McNaughton, DDS, MD and LuAnn M. Eidsness, MD

ABSTRACT

As people seek alternative therapies, the responsibility of the primary caretaker grows. This article addresses why people seek alternative therapies and discusses the ethics and challenges of the physician.

The use of alternative therapies is widespread in our culture. Physicians face a dilemma in that, on the one hand, they are trained in the medical paradigm of rational discourse, scientific tradition and accepted ethical standards, yet on the other hand, they must interact with patients who seek treatment alternatives that do not always fit within the paradigm. In this article a case report of the use of home brewed kombucha tea is presented and ethical issues are discussed.

CASE REPORT

A 64 year old Caucasian retired farmer from South Dakota was referred for evaluation of dizziness of new onset. Laboratory tests revealed leucocytosis and thrombocytopenia. He had been drinking one-half glass of kombucha tea (mushroom tea) three times daily for the past two months as a home remedy for his osteoarthritis. He had received the "mushroom" from a relative, along with handwritten instructions for the preparation of the tea. The mushroom is actually a dome-shape cluster or colony of bacteria and yeast. This colony formation is stirred into a container of sweetened tea and allowed to ferment for 7 to 14 days. A new colony forms on the surface which can then be used to start a new batch of "tea".

Subsequent examination and tests did not identify a cause for the new onset dizziness. The kombucha tea was suspected as a possible cause. This possibility was discussed with the patient. Issues leading to the decision to try this alternative therapy were explored. Traditional treatment modalities for chronic pain of osteoarthritis were identified. He agreed to refrain from drinking the "home brew" in the future.

REVIEW

There have been recent reports of one death and two hospitalized patients from the Spencer, Iowa area. These patients were consuming home-brewed kombucha tea.

Clinical research is lacking in the medical literature as to the effects or toxicities of this concoction. Numerous anecdotal reports are to be found on Internet (Kombucha @SHORE.NET) with claims of positive results in treatment of arthritis, facial wrinkles, graying hair, baldness, colon cancer, hemorrhoids, prostate enlargement, eczema and hypoglycemia. One Internet letter reported the cost of the tea at \$7 per day (\$2500/year). A mushroom-shaped colony commonly costs \$50 or is free if shared between users.

There is scant published medical literature concerning the efficacy and/or safety of this "tea". This case is an example of a very common situation that confronts each physician. Care providers face a dilemma of what to tell the patient who has chosen an alternative therapy. Some reasons patients seek alternate therapies are: (1) a desire for a "natural" approach to health care, (2) a faith in a specific non-medical approach based on religious, cultural or familial traditions or (3) frustrations with, or distrust of, physicians, drugs or standard medical intervention.¹ Some may do so because they perceive it as less expensive.

The sociological development of medicine, as a secular social institution since the Middle Ages, was based on a rather convincing record of therapeutic effectiveness, gaining territory at the expense of religion and other social institutions.² The claim of a scientific approach and an elevated profile of expertise by traditional medicine creates high expectation in the public. Highly technical practices and chronic diseases often, with less than fully satisfactory outcomes, leave some patients with the sense that medicine is ineffectual in certain settings. Also, traditional medicine often has a high cost/benefit ratio.

One patient in three used unconventional therapies in 1990. Expenditures for unconventional therapies were projected at \$13.7 billion, three quarters of which

(\$10.3 billion) was paid out-of-pocket. By comparison, out-of-pocket expenditures for hospitalization totaled \$12.8 billion, and out-of-pocket expenditures for all physicians' services totaled \$23.5 billion.³

ANALYSIS

How are physicians to respond? A review of ethical principles may clarify the appropriate response. Autonomy, nonmaleficence, beneficence and justice are frequently cited as basic bioethical principles.

Autonomy

Most certainly the principle of autonomy sanctions the notion that medical decisions should be made by the patients intentionally, with understanding of relevant issues, and without undue controlling influences.⁴ The concept of self-governance is strongly endorsed in our culture and champions personal choice in pursuit of alternative therapy should this be deemed desirable by the patient. The utilitarian view (as per John Stuart Mill) would allow that control over restriction of individual actions is legitimate only if it is necessary to prevent harm to other individuals. The evaluation of any action is based on its consequences. The result of a patient's view concerning alternative therapies could be summarized in the phrase, "I'll try anything if it helps."

If then the individual has freedom to choose alternative therapies, what duty remains for the medical practitioner? The principle of autonomy in decision making is based on the patient's informed consent. Some alternative therapies offer simplistic, vague or perhaps misleading claims about pathophysiology, action of the treatment or outcome expectations. Knowledgeable advice on both positive and negative aspects of alternative therapies should be provided. Physicians should not abandon patients to the consequences of alternative therapy (good or bad) because of an inability of patients to appreciate our perspectives. As physicians, our privileged background gives us a perspective that we cannot blame our patients for not sharing.⁵ Traditional medicine has a responsibility to be more familiar with the basic theory and practices frequently used by patients.⁶

A commonly observed effect of active patient involvement in treatment decisions and treatment application is an improved sense of well-being and personal control. The classic medical paradigm operates in an arena of rational discourse, scientific tradition and acceptance of ethical standards that regulate its activities.⁷ Alternative therapies often appear to strain the classical medical paradigm. Patients may be less concerned with standardized diagnostics, and more focused on eliminating symptoms.⁸ It is perhaps the existential nature of this effect on self that defies validation within the classic medical paradigm, (much as with any current explanation of placebo effect.)

Nonmaleficence

Although autonomy is often foremost in thought and discussion in medical ethics, especially in Western culture, the principle of nonmaleficence is also encompassing and important. This principle was expressed in the ancient credo of medicine "above all, do no harm." Nonmaleficence does not simply mean that it is important to not deliberately cause the patient harm. More than this, the physician must have a vigilance to try to anticipate and prevent harm that could inadvertently occur to the patient.

Physicians have a responsibility to be knowledgeable about alternative therapies. Physicians function not only in diagnosing and treating disease, but also in educating and in giving permission. Among respondents who reported a principle medical condition and used unconventional therapy for that condition, only 4% saw the unconventional therapy provider without also seeing a medical doctor.

In 1990, 89% of all who saw a provider of unconventional therapy did so without recommendation from their medical doctor. (Eisenberg used a broad definition of unconventional therapy that included relaxation techniques, chiropractic, massage, and biofeedback among others.)⁹ Physicians need to ask patients if they use alternative therapy. Nonmaleficence would give us cause to consider whatever advice we give. By encouraging or ordering alternative therapy, the physician risks being overtly involved should the patient suffer deleterious effects. These might include overt injury, minimal or no benefit, significant expense, or a delay in the onset of effective traditional therapy.

In denying alternative therapy, physicians risk straining the doctor/patient relationship. Discouraging alternative therapy may deny the patient that existential soothing and comfort previously mentioned. In denying alternative therapy are we then denying the patient the benefits that may be outside the classic medical paradigm, and beyond the scrutiny and validating process of the scientific method?

Beneficence

Beneficence requires that one endorse and promote the patient's good. Certainly difficulties with this charge can abound in areas where claims of alternative therapy extend outside the current medical paradigm. All these therapies could result in a public perception of medicine as exclusive, limiting and uncaring. Yet, for medicine to strive to best promote beneficence, there must be an emphasis on rational, scientifically-based tradition with logical arguments, laws of causality and consistent strategies for observation and experimentation.¹⁰ In order to promote the patient's good, physicians should attempt to accurately assess risk/benefit ratios and discuss these candidly with patients. Certainly there may be many occasions in which the physician advises the patient to avoid the

expense of potentially harmful remedies and treatments that can be substituted for safe, proven and beneficial conventional therapy.¹¹

Justice

A significant issue under the principle of justice involves cost. As escalating demand and costs outstrip funding of health care, all expenditures, whether out of pocket or third party payment, will be subject to scrutiny. A number of unconventional therapies described by Eisenberg are covered under third party payment.¹² Pressure is being applied by providers of these therapies to attain legitimacy in order to tap into third party resources. This will compound the problems in the debate on macroallocation of funds. How do we handle therapies that demonstrate some existential or placebo-like effects, in reproducible or measurable form, but otherwise fail the scrutiny of current scientific investigation?

DISCUSSION

How are we to proceed? Thorough and open investigation of these alternative therapies is in order. Wherever possible, physicians should insist that proponents or providers of alternative therapies give evidence that satisfies the basic questions of efficacy and safety: 1) Is the remedy better than placebo or doing nothing? 2) Is the remedy as safe as placebo or doing nothing? 3) Does potential benefit exceed the potential harm?¹³

If there is a shift in society's present medical paradigm, then there may need to be an exploration of the ethics of participating in such a shift.¹⁴ The shift may be toward reconciling traditional medicine with holistic and experiential aspects of alternative therapies. Physicians must attempt to dutifully work out the conflict between traditional medicine and alternative therapies with the principles of autonomy, nonmaleficence, beneficence and justice. This will take time. ...time to attempt to understand the patient's request, beliefs, values and agenda; time to foster a trusting relationship with the patient; time to judge the severity and risk of the patient's problem; and time to explain the rationale regarding the physician's recommendations. Negotiation may be required when instituting treatment. Certain benefits of alternative therapies may be outside the boundaries of the traditional medical. Risk/benefit and cost/benefit determinations may be used more extensively to evaluate these therapies.

A broad range of alternative therapies are used by our patients. The first step is for physicians to understand what the patients are utilizing. Adequate medical history with non-judgmental inquiries about the use of unconventional therapies is required.¹⁵ The principle of autonomy requires that physicians heed the patients wishes. If the physician wishes to override autonomy and act paternalistically to preempt the patient's

decisions concerning alternative therapies, the physician should facilitate development of patient awareness of risks and benefits of the alternative therapy so that appropriate informed consent can be made by the patient. If traditional medicine does not research such issues appropriately, there is a danger that medicine can be criticized as a "blindfolded and unimaginative enterprise."¹⁶ The ethical principles of nonmaleficence and beneficence require that physicians enter into the patient's decision making process regarding alternative therapies. As physicians advocate for their patients in the evaluation and utilization of alternative therapies, conflicts may arise when therapies lie outside the medical paradigm. Physicians will need to educate themselves about these alternative therapies in order to effectively minimize risk of harm to the patient. Physicians may allow, or even encourage, use of alternative therapies by patients if cost/benefit ratios, risk/benefit ratios, and beneficial therapeutic results are appropriate and if said therapies do not replace safe conventional therapy.

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The goal of the PRO program is to improve the processes and outcomes of care for Medicare beneficiaries. SDFMC, the PRO for South Dakota, achieves its goals through the performance of quality improvement projects. Quality improvement projects are collaborative efforts with hospitals and physicians which result in measurable improvement of process and outcomes related to specific clinical issues.

It is through a partnership based on the common goals of promoting quality, effectiveness, efficiency and economy of services to Medicare beneficiaries that hospitals and physicians voluntarily participate with SDFMC. As we approach a time when measurable improvements in patient care are an imperative for the patient, third party payor, etc, SDFMC is offering resources to support hospital and physician activities in this area.

Collaboration in SDFMC quality improvement projects helps meet JCAHO accreditation standards. Through SDFMC there is access to an external database for comparison/benchmarking of other facilities of like size. SDFMC has statisticians, physicians, nurses, and medical record staff to complete the project tasks and analyses. SDFMC can serve as an external, unbiased source to address issues that may be difficult to address internally by physicians and hospitals.

Most of South Dakota hospitals have participated in collaborative quality improvement projects. We look forward to joining with all hospitals and physicians in promoting the quality of care provided in South Dakota.

Gerald Tracy, MD
Medical Director

Estrogen Replacement Therapy and the Risk of Thromboembolism

Janet Fischer, Pharm.D, Sioux Falls, SD

Estrogen replacement therapy (ERT) in postmenopausal women has become increasingly common as its list of indications has grown. Previously used to treat "hot flashes" and genitourinary atrophy, this treatment modality is now known to prevent bone loss due to osteoporosis and reduce cardiovascular disease. As ERT has become more widespread, recent medical literature has focused on a re-evaluation of its many potential risks. One of the risks that is being scrutinized is that of thromboembolism. This adverse effect seems to have been generalized from the data collected on oral contraceptive agents and applied to estrogen products used for ERT. Most major reference textbooks list thromboembolism as both an adverse effect of and a relative contraindication for ERT. What data is there to support this concern?

It is fairly well known and documented in the literature that the estrogenic component of oral contraceptives increases the risk for arterial and venous thrombosis. The synthetic estrogens found in these products have been shown to increase the activity and levels of various clotting factors in a dose dependent manner. However, all estrogens are not alike, and this data should not be indiscriminately extrapolated to ERT. Oral contraceptives contain synthetic estrogens, either ethinyl estradiol or mestranol, whereas ERT usually involves the use of oral conjugated equine estrogen (Premarin®) or transdermal estradiol (Estraderm®). These naturally occurring estrogens used in ERT, while maintaining good estrogenic potency at the site of action, have a significantly decreased effect on the liver compared to synthetic estrogens. A commonly used marker of estrogen effect on the liver is the production of sex hormone binding globulin. The synthetic estrogen ethinyl estradiol is estimated to have between a 200 and 600-fold increased potency in stimulating the production of this protein compared to natural estrogens. The potency in terms of liver effects of the usual dose of conjugated estrogens for ERT has been estimated to be equivalent to about one sixth of the lowest dose oral contraceptive. Similarly, the liver's production of clotting factors, while increased by synthetic estrogens, does not seem to be increased with natural estrogens. In vitro data regarding the effects of natural estrogens on coagulation have been contradictory, with about an equal number reporting hypercoagulability as not. These have been criticized, however, for using global coagulation tests that do not reflect the dynamic state of the body's hemostasis system. A more recent study that utilized a

very specific marker for blood clotting, has demonstrated no hypercoagulability in women on ERT, with or without progestin.¹ The transdermal estradiol has the added advantage of further diminished liver effects due to its lack of first pass through the liver.

Epidemiologic data also seem to support the lack of association between ERT and thromboembolism. Two epidemiologic studies^{2,3} and one small prospective study⁴ involving women on ERT have shown no increased risk of thromboembolism, however, their data is limited by the fact that they excluded women with other risk factors. A more recent, case-controlled study that included women with other risk factors found no evidence that ERT, in the form of conjugated equine estrogens, was a risk factor for thromboembolism.⁵

Another potentially confounding factor in this issue is the use of progestational agents in combination with ERT. It is thought by some that the progestins used in oral contraceptives may contribute to their thrombogenic potential, but the data supporting this belief is weak. On the other hand, progestin-only oral contraceptives are often recommended for women who have a history of thromboembolism. As with estrogens, the progestational agent most commonly used with ERT, medroxyprogesterone acetate, is structurally different than the progestins in oral contraceptives and, therefore, may have different effects. Studies evaluating the thromboembolic potential of ERT have varied with regard to inclusion of patients also on progestins. The previously quoted in vitro study of blood clotting did include patients taking estrogen alone and estrogen with progestin, as have several other in vitro studies.¹ The one small prospective study looking at adverse effects of ERT included the use of medroxyprogesterone acetate⁴ but other epidemiological studies did not. However, a study of high dose medroxyprogesterone acetate use in cancer patients did not show any adverse effects on coagulation and even a possible increase in fibrinolysis.⁶

How should this information be applied to prescribing decisions? It is certainly safe to conclude that the risk of thromboembolism from ERT is less than that associated with oral contraceptives and may be non-existent. The addition of progestins does not appear to alter the risk, but more study is necessary to decide this issue. Whether or not ERT can be used safely in patients with a history of thromboembolism is still difficult to answer without more study. One author recommends the use of the lowest dose of transdermal estradiol to minimize the hepatic effects as much as

possible.⁷ As the use of ERT becomes more widespread, a prospective study in these high risk patients is warranted.

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The Gardener

*As we move from there and then
All the way to here and now
Things must move and we feel pain
From roots pulled from the ground.*

*We cannot see the roots we have
They lie deep within the ground,
And when the gardener uproots them free
We feel lost and we look down.*

*He knows we are to grow in beauty
And not to stay the same.
We must be moved to some place else
Or we will never change.*

*Then He plants us in a new place
A different time and space.
He makes our roots to grow again
'Til we once again feel safe.*

*We would never choose to move,
We'd stay rooted in one place;
But the gardener knows it's pain from change
That illuminates our grace.*

N. Dean Nasser, Jr
Sioux Falls, SD



"Dear Doctor"

Hi! As I considered what I might write about this month, I was reminded of a conversation I had a few years ago with a young, physician spouse. She asked me to tell her about the Alliance. Maybe you have had the same questions. What is the alliance? What are it's goals and purposes? Why should my spouse be a member? Well, when I was asked by this young woman, I proceeded with a great deal of enthusiasm to describe to her what I thought the Alliance was all about. I spoke of the support that comes from associating with others who share similar lives and challenges. I addressed the importance of being an advocate for the medical community, through both legislation and medical research and education funds. I also told her that I felt we were something of a "service organization". The Alliance becomes a vehicle for us to give something back to our communities. Her reply caught me off guard.

"Well, personally, I just don't think it's a good idea for 'doctors' wives' to always hang around together. My husband's profession is just that; HIS profession. Let him deal with it's problems. And furthermore, I don't buy into this idea that just because our spouses are doctors that we somehow have to give something back to the community. What has the community done for us? I guess my real question is: WHAT'S IN IT FOR ME?"

I didn't have much of a response that day. I guess I thought that everyone was entitled to their opinion. But I have regretted ever since that I did not at least share with her some experiences that I have had where the Alliance has had a very personal and significant effect on my life. I should have told her that there IS something in it for her. A great deal, in fact.

The Alliance works in primarily four major areas. They are membership, legislation, AMA-ERF and Health Promotions which focuses mainly on stopping domestic and other forms of violence. In future issues I plan to address each of these areas individually. But for now, let me just say, that while it may appear that we are out there spending lots of precious time helping people we don't know, the reality of it is that the rewards and benefits of that service are returned back to us many times over. I wish that each physician spouse in this state could have the chance to realize the many "gifts" that await her through her membership in the Alliance.

I am aware of how complex and busy the world has become. But I also know that people are able to make time for those things that are important and matter most. I believe that the Alliance is one of those things. It is definitely worth my time. Please encourage your spouse to join the Alliance if he or she has not already. I can promise you this. The gifts we give are indeed important. But, the gifts we receive are priceless.

P.S. Speaking of gifts: I saw this quote the other day. It read:

Tomorrow is a mystery.

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But today is a gift.

That is why we call it "the present"!

I love it! See you next month!

Susan Jarks

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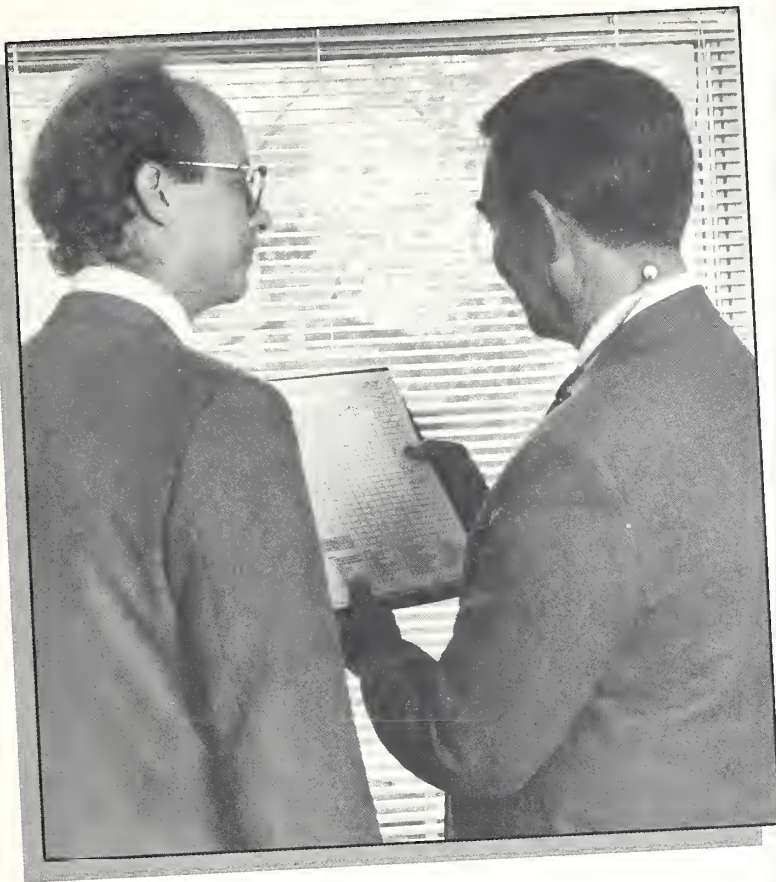
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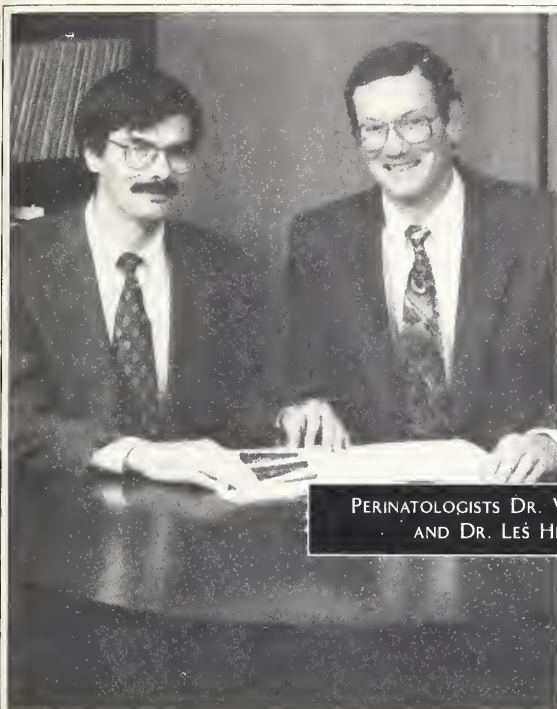


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- The patient who withholds information from me.
- The patient who self-diagnoses then demands I give him antibiotics.
- "Know-it-all" patients who have "researched" their condition.
- Patients who refuse antibiotics or other effective treatment.
- Hostile patients who just want a referral from me.
- The patient with added complaints not mentioned until the exam is over.

These were just a few of the dozens of frustrations listed by physicians attending a recent Bayer (formerly Miles) Workshop for Physician-Patient Communication. Do you recognize any of your patients in this list?

"I've never met a physician who can't describe at least three frustrating patients," reports Debra McBride, RN, JD, Risk Management Consultant for Midwest Medical Insurance Company (MMIC) and trainer for the Bayer Institute of Health Care Communication. "Many of the frustrations listed arise from communication problems."

Dr Paul Sanders, a family practice physician, CEO of the Minnesota Medical Association and also a faculty member of the Bayer Institute, agrees. "Communication is an issue because continually shifting health care coverage means fewer long-term patients for physicians, presenting a barrier to forming that crucial doctor-patient relationship."

Establishing a productive, harmonious physician-patient relationship may seem difficult. Many physicians argue that they do not have the time to spend bonding with every patient they encounter throughout a busy day. With reimbursements dwindling and patient loads swelling, some providers object that spending time forming relationships with patients is not as important as curing their illness.

Why do physicians have difficulty communicating with patients and establishing good relationships? "Because we are taught from medical school to find the patient's problem and fix it," Dr Sanders states. "While this 'Find-it, Fix-it' model is certainly not inappropriate, it's incomplete." A vast body of research demonstrates that optimum health outcomes and improved patient adherence also depend on physicians communicating the "Four E's" with their patients: Engagement, Empathy, Education and Enlistment.

Engage the Patient

How can physicians connect with patients and engage in a productive medical interview within the confines of the few minutes allotted on a busy schedule? "We feel the pressure to get to the patient's problem and move on," says Dr Sanders. "It feels as if we simply don't have the time to spend connecting with each patient."

A physician who feels rushed may communicate that to a patient verbally and non-verbally, discouraging the patient from freely sharing information. When physicians complain about patients who "withhold information," Ms McBride suggests physicians may be contributing to the problem by asking closed-end questions, or interrupting with questions that re-direct the interview. This can result in important information being missed. "Improper performance of the diagnostic interview and evaluation is the most common medical procedure resulting in malpractice claims," according to Ms McBride. "Simply put, misdiagnosis can result from a poor medical interview. Communication studies have shown that physicians who listen to their patients are more likely to develop an accurate diagnosis."

One such study discovered that physicians, despite perceiving themselves as good listeners, waited an average of only eighteen *seconds* before interrupting the patient in the initial interview. Ask yourself, do I interrupt or cross-examine my patients? What do my interruptions tell the patient about how careful I'm listening? Interruptions and closed-end questions send the message, "I am very important; what you have to say is not."

Physicians tend to approach the medical interview as a fact-finding mission, asking specific questions to elicit specific information. Instead, Dr Sanders suggests, spend a few moments in the initial part of the interview engaging the patient on a personal level. With a new patient, "Tell me about yourself," is a good way to connect and takes very little time. The patient can relax and you can get to know them as a person. On a return visit, a brief comment on something you recall about this patient reestablishes that connection almost effortlessly.

Once you have established a level of rapport, agree upon the agenda for the visit: Why is the patient here today? Getting all of the patient's complaints or concerns out early obviates the "By the way..." as you leave the room. It sends the message to the patient that you

are concerned about their overall well-being. If the patient has numerous complaints, determine which ones the patient wants you to address today and which can wait for another visit. One technique is to ask the patient, "What do you hope to accomplish here today?" A patient being seen for a sore throat may casually mention another, more medically significant, problem that could otherwise have been missed.

Empathy Reduces Anxiety

Along with engaging the patient on a personal level, physicians have a unique opportunity to empathize with patients. The doctor-patient relationship is an intimate, human one and needs a foundation of common understanding. "The patient wants to be seen and heard, not just as a medical problem but as a human being," Ms McBride states. In empathizing with the patient, the physician is listening for statements that are filled with strong feelings and then pausing to acknowledge the feeling expressed. An example might be, "It sounds like you're under a lot of stress—is that making you feel anxious?"

This can be a difficult task for physicians, but everyone has a need to be understood. Taking a moment to acknowledge the emotional impact an illness is having upon the patient tells the patient you are empathetic to their concerns. Patients often feel isolated by their illness and anxious about what to expect. Sharing those feelings with their physician establishes personal rapport and can provide positive outcomes, including reduced patient anxiety, more willing adherence to the prescribed therapy and increased satisfaction for both the physician and the patient.

Education and Enlistment in Health Care

Once a good physician-patient rapport has been established, patient adherence to therapeutic regimens can be further improved by education. A group of physicians estimated they spent five to seven minutes during the medical interview educating their patients about individual health issues. Audiotapes of the actual patient encounters revealed that, in fact, less than one minute was spent on patient education. While a "time" approach to patient education is unrealistic, it is clear that patients want to learn more from their physicians.

A Bayer Institute patient survey showed that 48% of patients want physicians to ensure the patient understands what they say, and 60% want physicians to do a better job of explaining options. Look at your own patient approach. How well do you educate your patients? Do they follow your advice or do you have an unacceptable level of nonadherence?

Research has shown physicians can assume every patient comes to them with a set of questions the patient may or may not actually ask. The trick to educating your patients is knowing to answer the unvoiced question.

Patients have questions about the mysteries of health—what's happening to me? Why has it hap-

pened?" asserts Dr Sanders. "They want to understand the mysteries of the medical world—why are you doing this test? When will I know what this means? Is it going to hurt me? We must assume each patient has these vital concerns and strive to answer them, whether the patient actually asks the questions or not." By answering these questions, you educate the patient and can correct any misconceptions about their health.

Many physicians have encountered the patient who has no clue about how his or her body functions. "If the patient doesn't believe that something going into her stomach can affect her heart, the patient will not appreciate the importance of a dietary restriction," Dr Sanders states.

It is up to the physician to discover the patient's belief systems and then educate the patient accordingly. When the patient's beliefs and the physician's knowledge do not match, patient adherence to a prescribed regimen drops. The resulting poor outcome frustrates both the patient and the physician. In fact, a subtle change in the physician's approach can alleviate the problem altogether.

As an example, Ms McBride cites the physician-listed frustration, "The patient who self-diagnoses, then demands antibiotics." According to Ms McBride, "This patient believes he knows what is wrong and will only be satisfied if the physician's diagnosis agrees." Instead of being frustrated by this, the physician's approach should be to assume a self-diagnosis with every patient. "Every patient has thought about what's wrong with them and possibly solicited diagnoses from friends and relatives," Dr Sanders adds. "If we don't ask the patient how our diagnosis fits with what they were thinking the patient is likely to discount our conclusions and ignore the prescribed regimen. We have missed an opportunity to educate a patient and to improve their health."

Discovering what the patient is thinking, determining how your diagnosis fits and educating the patient to correct any health misconceptions is an educational process requiring just a shift in physician focus. This educational process leads easily into enlisting the patient in his or her own health care. When the patient feels the physician understands and has listened to any concerns or fears, the patient is more willing to accept and follow a treatment regimen that will result in a positive health outcome.

Learning the Skills Brings Added Benefits.

There is another important aspect to improving your physician-patient relationships by communicating better: Unhappy patients, who feel that their physician did not care about them, are more likely to sue after a bad outcome. Medical malpractice attorneys report more than one hundred calls per month from patients seeking to sue their physicians. The vast majority of these potential plaintiffs simply do not know the difference between a bad outcome and bad medicine. However, the sheer numbers of angry, dissatisfied patients speaks volumes about current physician-patient relationships.

Although communication problems may seem in your busiest moments to be insurmountable, the techniques are simple to learn and fairly effortless to employ according to physicians who have experienced the Bayer workshops. Taking a few moments to consciously connect with your patients, educate them and enlist them as partners in their own health care results in greatly improved adherence, mutual satisfaction and better overall health outcomes.

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CME CONFERENCES

JULY 1995

- July 18 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- July 19 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Clinical Pathology Conference, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- July 19 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Ronald Halvorson, MD, Topic: Bone Marrow Transplants, Info: David Rossing, MD 331-3490.
- July 19 **Geriatric Forum** - 7:00 am, RDTN Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- July 20 **Tumor Conference**, Dakota Midwest Cancer Institute - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- July 20 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- July 20 **Neuroscience Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- July 21 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- July 24 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145
- July 26 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- July 26 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: James Gavin III, MD, Topic: Type II Diabetes; New Strategies for Improving Glycemic Control; Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- July 27 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- July 27 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- July 27 **Tumor Conference**, Dakota Midwest Cancer Institute - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- July 28 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145.

AUGUST 1995

- August 2 **Central Plains Clinic** - Wednesday Noon Conference, 12:00 noon, 4th Floor Conference Rooms, Speaker: Barry J. Lankhorst, MD, Topic: Calcium Channel Blockers, Info: David Rossing, MD, 331-3490.
- August 2 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- August 3 **Tumor Conference**, Dakota Midwest Cancer Institute - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- August 3 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- August 3 **Biomedical Ethics** - East Auditorium, Rapid City Regional Hospital, Info: Medical Staff Office - 341-8705.
- August 3 **Clinical Pathology Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: to be announced, Topic: to be announced, Info: Dr's J. Ruggles & R. Thompson, 665-9002.
- August 4 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- August 8 **Breast Cancer Conference** - 12:00 noon, Meeting Room B, Sioux Valley Hospital, Info: Dr. Thomas Cink - 333-5244.
- August 8 **CPR Certification/Recertification** - 7-10:00 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- August 9 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- August 9 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: Edward T. Zawada, MD, Garry Wossner, MA, CCC, MBA & Cheryl Boldt, RN, Topic: Sub-Acute Care - Bridging the Gap from Hospital to Home, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- August 10 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- August 10 **Internal Medicine Tumor Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: To be announced, Topic: To be announced, Info: Dr. J. Ruggles & Dr. R. Thompson, 665-9002.
- August 10 **Tumor Conference**, Dakota Midwest Cancer Institute - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- August 10 **Cardiac Cath Conference** - 7:30 a.m., McKennan Hospital Auditorium, Info: Cardiopulmonary Dept, 339-8171.
- August 14 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145

- August 15 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- August 16 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Topic: Clinical Pathology Conference, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- August 16 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: John Sall, MD; Topic: Enuresis; Info: David Rossing, MD 331-3490.
- August 17 **Geriatric Forum** - 7:00 am, RDTA Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- August 17 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- August 17 **Tumor Conference**, Dakota Midwest Cancer Institute - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- August 17 **Neuroscience Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- August 18 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- August 18 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- August 23 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- August 23 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: Lowell Hyland, MD; Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- August 24 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- August 24 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- August 24 **Tumor Conference**, Dakota Midwest Cancer Institute - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- August 25 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145.
- August 28 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145
- August 30 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: William Fuller, MD; Topic: Depression & Antidepressants in Geriatrics, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- August 31 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- August 31 **Tumor Conference**, Dakota Midwest Cancer Institute - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.

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AUGUST 1995

- August 5-7 **3rd Annual Comprehensive Gynecology Course**, Hyatt Regency San Francisco. Fee: \$495. 13.5 hrs AMA Category 1 credit. Contact: Sylvia Razzo, Ctr for Bio-Medical Communication, 80 W Madison Ave, Dumont, NJ 07628. Phone: (201) 385-8080.
- August 11-13 **Family Medicine Update**, Cheyenne Wyo. AMA Category 1 credit avail. Contact: Sally C. O'Neill, Ph.D, Assoc Dean, Creighton Univ CME Div, 601 N 30th St, Suite #2130, Omaha, NE 68131. Phone: (800) 548-2633.
- August 18-19 **Advanced Life Support in Obstetrics**, Grand Hotel, Bloomington, Minn. AMA Category 1 credit avail. Contact Hennepin County Med Ctr, Off of Academic Affairs, 701 Park Ave, Mail Code 869-A, Minneapolis, MN 55415-1829. Phone: (612) 347-2075.

SEPTEMBER 1995

- September 9 **Cancer Care in the 21st Century from a Primary Care Perspective**, Eppley Science Hall, UNMC, Omaha, Neb. Fee: \$20. AMA Category 1 credits avail. Contact: Ctr for Cont Educ, Univ of Neb Med Ctr, 600 S 42nd St, Omaha, NE 68198-5651. Phone: (800) 642-1095.
- September 15 & 16 **Annual Meeting of the South Chapter of the American College of Physicians and the SD Society of Internal Medicine**, Radisson Encore Inn, Sioux Falls, SD. Contact: John D. Barker, Jr, MD, AM College of Phys, 111 W 39th St, Sioux Falls, SD 57105. Phone: (605) 331-4050.
- September 16 **8th Annual Internal Medicine Update**, Univ of Neb at Lincoln Student Union, Lincoln, Neb. Fee: \$750. AMA Category 1 credits avail. Contact: Ctr for Cont Educ, Univ of Neb Med Ctr, 600 S 42nd St, Omaha, NE 68198-5651. Phone: (800) 642-1095.
- September 21-23 **6th Annual North American Menopause Society's Scientific Conference**, San Francisco. Contact: Fran Arman, Dir of Media Relations, 1159 Riverview Dr, Macedonia, OH 44056, Phone: (216) 467-5229.
- September 23 **2nd Annual Patient Education Strategies**, Henry Doorly Zoo, Omaha, Neb. AMA Category 1 credits avail. Contact: Sally C. O'Neill, Ph.D, Assoc Dean, Creighton Univ CME Div, 601 N 30th St, Suite #2130, Omaha, NE 68131. Phone: (800) 548-2633.

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Mary S. Carpenter, MD, President
South Dakota State Medical Association

Over the past six weeks I have had a lot of congratulatory letters and phone calls. It is very rewarding to know that people are so supportive. There is one interesting comment however, that has been made to me several times by a number of people. They have expressed their surprise that the "good ol' boys" of the SDSMA have selected a woman (and a young physician at that) to be the President of this Association. The reason I comment about this is that in the years of my involvement in this group I have not had the feeling there is a "good ol' boys" kind of attitude. I look back on the presidents over the last several years and find that all of them were quite young. They are all physicians in active practice and very much involved in medicine. These are also the people that have been the most supportive and given me the most encouragement and I thank them all. I have to admit, though, that they will all seem younger and younger as I get older — just kidding guys!

My point in bringing this up is that any physician who is interested in helping this Association to move forward will have a place. I know that the present leaders welcome any input from the members and if you are willing to be involved there is plenty to do. I would personally like to encourage every member to be actively involved with issues both at their local district level and at the state level. I know that medicine is always changing and to say that this is a most important time for shaping the future is almost a cliché, but I believe

that once anyone becomes involved with organized medicine they will see the impact and will continue to stay involved. We will then always have a strong group to effectively deal with the changes in medicine that come from outside forces.

I would also like to encourage any member who thinks that this is a closed group to check it out! I want everyone to know that all ideas are welcome for discussion. If there are issues that you think we should be dealing with please let me know. I know from past experience that you will find plenty of help and support if an issue is important to you. I have found from attending the national meetings of YPS and AMA that we are fortunate here in South Dakota. Many states do have a relatively closed organization and especially young physicians have trouble getting heard.

Finally, I do think that this Association has been made up of good dedicated people and will continue to be that way in the future, but I don't believe that this group should be saddled with the negative connotations of the "good ol' boys" title.

A handwritten signature in dark ink that reads "Mary Carpenter MD". The signature is fluid and cursive, with a long horizontal line extending from the end.

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Transactions Of The

South Dakota State Medical Association

114th Annual Meeting

June 8-10, 1995

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P. Kenneth Aspaas, MD (1996) Director of Medical
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Thomas Krafka, MD, Rapid City

Editorial

Illness and the Psyche

The broad spectrum of illness and health care continues to amaze me. In a recent week, I had two particularly interesting patients whose dramatic neurologic complaints clearly overlapped the realm of psychiatry. The problems are illustrative and, I believe, worthy of sharing. In the interest of patient anonymity, some descriptive details are modified.

The first patient was a 35 year old woman who was involved in what seemed to be a trivial car accident and was subsequently noted to be confused. She could talk lucidly and appropriately, but claimed to have an amnesia for the past six years. She had absolutely no difficulty recalling details of more remote past history or assimilating new information and memory. The amnesia was very extensive. Indeed she had no recall of living in the town which she had moved to about three years earlier. She also complained of headache. An extensive evaluation was undertaken looking for evidence of cerebral concussion, subarachnoid hemorrhage, or seizure disorder. An EEG, MRI of the head, spinal fluid examination, and laboratory studies were all normal. On direct questioning, family members did

acknowledge that the patient had been having increasing worries about financial and family issues.

The patient consented to a session of hypnosis, and after a single visit with the psychologist, she proclaimed her memory completely restored. She, too, was able to articulate emotional and social stressors in her life.

The second patient was a 28 year old male who fairly dramatically began having seizure-like episodes and breathing problems. He was hospitalized in his home town and later transferred to a tertiary care center when he continued to have dramatic seizure-like episodes. The events would frequently be preceded by his calling out that "one is coming". After the events, which consisted of generalized shaking of the extremities, he seemed very frightened and confused. An EEG was mildly abnormal, and it was initially surmised that these events might be a form of repetitive partial complex seizure. However, they persisted despite the application of two anticonvulsants with therapeutic levels.

As with the first patient, extensive testing was undertaken. This included an MRI scan, a spinal fluid

examination, and multiple laboratory studies. Ultimately, a video EEG helped definitively establish that the episodes were non-organic. Until a video record of the events was obtained, the patient's physicians had not actually observed an episode. Generally, the spells began while the nurses were out of the room. The video monitoring demonstrated a completely normal EEG immediately before and after the episodes. His spells consisted of random, asymmetric flailing of arms and legs and a violent rocking of his head back and forth.

This patient had a long hospitalization as the diagnosis was being made. In addition to parenteral anticonvulsants, he was treated multiple times with parenteral benzodiazepines to stop his repeated "seizures". An extended family was present virtually around the clock and were very apprehensive and vocal about the need to bring these spells under control. For a number of days the nursing staff was also very taxed as these episodes occurred frequently and with great tumult on the ward.

When the patient was finally gently confronted with the belief that the episodes were non-organic, he was extremely resistant to the idea. He denied any emotional problems in his life and was adamantly convinced that some organic explanation for his spells was being missed.

Problems such as those posed by these two patients can cause great turmoil for both caregivers and families, not to mention the patients. Confusion in general, is usually an ominous clinical symptom. Even if the confusion is limited to some form of amnesia, families and patients with such conditions are frequently distraught and impatient. In my experience, pseudo-seizures are particularly more dramatic in terms of their ability to mobilize healthcare staff and families into a state of great consternation. My first exposure to pseudo-seizures occurred as a student. I distinctly remember a number of "code blues" being called for a patient whose periodic wild flailings would end with prolonged periods of apnea. In my subsequent clinical practice, as well, these occasional patients have invariably proven to be very challenging to deal with. There is, of course, the underlying concern that some organic process is at work and being missed. Almost always, the patient and families are skeptical of, if not overtly hostile to, the notion that the dramatic episodes in question are not organic. To complicate matters even further, studies have shown that a high proportion of individuals with pseudo-seizures also have a propensity for organic seizures as well.

In thinking about these two patients, and the difficulties encountered in their care and ultimate diagnosis, I am reminded of Sherlock Holmes' quote that ".....When you have excluded the impossible, whatever remains, however improbable, must be the truth." Such truth, in instances such as those I have recounted, can seem very hard won and tenuous.

Certainly both patients pose effective examples of how dramatic and disruptive the psyche can be in people's lives. The patients know that their symptoms are "real" and frequently vociferously resist explanations stemming from our understanding of hysteria and conversion reactions. Presumably eminent physicians of old, such as Charcot and Freud, battled at least as much skepticism and hostility as can abound today.

At this juncture, I cannot predict what the future holds for these two patients in terms of their prognosis and lives. Certainly I empathize with the various psycho-social precipitants which brought them to their crises. I also regret the unavoidable elements of conflict and hostility which seem to attend the attempts to resolve such clinical upheavals. Even when the caregiver strives to be gentle and understanding, the clinician is easily cast in the role of a messenger with most unwelcome tidings. As caregivers in such situations, we may sagely come to learn that the circuitous pathways revolving about such patients may fail to lead either the patients or ourselves to where we would like to be going.

Jerome W. Freeman, MD

Editor

MINUTES

BUDGET AND AUDIT COMMITTEE

4:30 pm

Wednesday, June 8, 1995

Roosevelt Room, Ramkota Inn

Sioux Falls, SD

The meeting was called to order by James Reynolds, MD, President, inasmuch as Committee Chairman Dr. Martin Christensen was unable to attend. Those present included Drs. Reynolds, James Engelbrecht, Rodney Parry, Thomas Krafka, Stephan Schroeder, Mary Carpenter, Michael Pekas and Richard Holm, and staff, Bob Johnson and Jan Anderson.

The minutes of the previous meeting were approved as printed and distributed. The CPA audit prepared by McGladrey and Pullen for the 1994-95 fiscal year was distributed and reviewed by Mr. Johnson. Following brief discussion, the committee approved the CPA audit as submitted.

There being no further business, the meeting adjourned at 5:00 pm.

MINUTES

FIRST COUNCIL MEETING

3:00 pm

Wednesday, June 7, 1995

Roosevelt Room, Ramkota Inn

Sioux Falls, South Dakota

The meeting was called to order by Richard Holm, MD, Chairman. Those present for roll call were: Drs James Reynolds, Ken Bartholomew, Mary Carpenter, Jeff Hanson, James Engelbrecht, John Sall, Rodney Parry, Robert Vandemark, Jr., Michael Pekas, Thomas Krafka, Richard Holm, Stephan Schroeder, Douglas Traub, Paul Eckrich, James Hovland, James Larson, Stephen Gehring, Richard Wake, Thomas Huber, Jeffrey Hagen, K. Gene Koob, Guy Tam, Lowell Hyland, C. Roger Stoltz, Daniel Kennelly, Bruce Mannes, Charles Hart, Carol Zielke, Scott Eccarius, Richard Renka, Gregg Tobin, James Collins, Ben Henderson, Kevin

Bjordahl, and Alan Bloom, SDSMA staff: Robert D. Johnson, Jan Anderson, Dean Krogman, Donna Sievers, Guest: Robert L. Ferrell, MD

BUSINESS:

Dr. Huber moved to approve the minutes of the previous meeting as printed and distributed. The motion was seconded and carried.

REQUEST FROM AMA TO HELP FUND LITIGATION CENTER - The Council considered a request from the AMA to assist in formation of a litigation center. This center would be a joint venture between the AMA and state societies to conduct joint litigation activities, facilitate better communication on legal issues, and share the benefits of our legal work product. Dr. Pekas moved that the SDSMA participate in funding the AMA litigation center. The motion was seconded and carried.

CANDIDATES FOR HONORARY LIFE MEMBERSHIP - Dr. Parry moved that the following physicians be elected to honorary life membership in the SDSMA:

Lyle Freimark, MD - Rapid City

Gordon Held, MD - Georgia (Yankton)

Donald Frost, MD - Sioux Falls

Robert Akerson, MD - Rapid City

The motion was seconded and carried.

DAKOTACARE UPDATE - Dr. Robert L. Ferrell gave an update on DAKOTACARE for the Council's information. He reviewed their annual report and stated that April and May were good months for DAKOTACARE. DAKOTACARE anticipates a stock split and should allow for trading in the late fall. He indicated that enrollment continues to increase, particularly in the TPAs. 90% of stock is owned by physicians, 5% by employees and 5% by sales representatives, and of this the Board of Directors owns 9% total. Bob Johnson outlined the report received from legal counsel regarding DAKOTACARE and their opinion that we are not in conflict with the Sherman Anti-trust Act. This was accepted for information.

NOMINATIONS FOR AMA APPOINTMENTS - The Council reviewed the listing of AMA committees and councils with openings. This was accepted for information.

RESOLUTION FOR SDSMA PENSION PLAN - Dr. Hagen moved to approve the resolution proposed as it relates to the SDSMA pension plan. The motion was seconded and carried.

TRAUMA GRANT FOR SOUTH DAKOTA - Dr. Fred Harris presented information on the need for a statewide trauma program and he asked SDSMA to encourage the Governor and State Health Department to apply for the \$130,000 in federal funds available for the establishment of such a program. Following discussion, Dr. Larson moved the SDSMA encourage the Governor to use the \$130,000 federal funding available to gather information and develop statistics regarding the need for a statewide trauma program involving both the Medical Association and the Hospital Association; then when statistical data is available this be referred to the Commission on Medical Service to work on developing a program if it is deemed to be needed. The motion was seconded and carried.

MEDICAID MANAGED CARE PROGRAM - Dr. Engelbrecht gave a brief update on the State's Medicaid program and stated additional information would be provided at the second Council meeting. According to the State,

managed care is going well for the Medicaid program and saving money for South Dakota. This was accepted for information.

PSA FROM FOUNDATION - Dr. Engelbrecht moved the Council approve the proposed public service announcement prepared by the South Dakota Foundation for Medical Care. The motion was seconded and carried.

THANK YOU FROM ALLIANCE - The Council received a thank you from Helen Owens, president of the Alliance. The Council unanimously voted to introduce to the House of Delegates a resolution of commendation to the Alliance and Helen Owens for their Family Violence Campaign.

There being no further business, the meeting adjourned at 4:30 pm.

MINUTES SECOND COUNCIL MEETING

11:00 am
Saturday, June 10, 1995

Harvest Room, Ramkota Inn
Sioux Falls, South Dakota

The meeting was called to order by Richard Holm, MD, Chairman. Those present for roll call were: Drs Mary Carpenter, James Engelbrecht, Stephan Schroeder, Rodney Parry, Thomas Krafka, Richard Holm, James Reynolds, Paul Eckrich, Kenneth Bartholomew, James Hovland, James Larson, Richard Wake, Thomas Huber, K. Gene Koob, Jeffrey Hagen, Guy Tam, Lowell Hyland, Douglas Traub, Dana Windhorst, Robert VanDemark, Jr, C. Roger Stoltz, Daniel Kennelly, Jem Hof, Charles Hart, Carol Zielike, Scott Eccarius, Richard Renka, Richard Kafka, Greg Tobin, James Collins, Ben Handerson, Jeff Hanson, John Sall, SDSMA staff: Robert Johnson, Jan Anderson, Dean Krogman, and Donna Sievers

Dr. Holm briefly discussed the "Housecalls" programs that are presently in production, indicating featured speakers and topics that will be covered.

A motion was made to dispense with the reading of the minutes of the previous meeting. The motion was seconded and carried.

BUSINESS:

SEATING OF NEW COUNCILORS AND ALTERNATE COUNCILORS - Dr. Holm welcomed the newly elected and re-elected councilors and alternate councilors.

DATES FOR 1995-96 COUNCIL MEETINGS - The Council reviewed and confirmed the following dates for the 1995-96 Council meetings:

Friday, September 22, 1995

Friday, November 10, 1995

Friday, March 29, 1996

ELECTION OF COUNCIL CHAIRMAN - Dr. Wake nominated Richard Holm, MD, as Chairman of the Council. A motion was made that nominations cease and a unanimous ballot be cast for Dr. Holm. The motion was seconded and carried.

There being no further business, the meeting adjourned at 11:20 am.

MINUTES

FIRST HOUSE OF DELEGATES MEETING

8:30 am Bay 1 & 2, Ramkota Inn
Thursday, June 8, 1995 Sioux Falls, South Dakota

The meeting was called to order by Speaker of the House, Stephan Schroeder. Those present for roll call include: Drs. James Reynolds, Mary Carpenter, James Engelbrecht, Stephan Schroeder, Richard Holm, Michael Pekas, Thomas Krafka, James Hovland, Paul Eckrich, Stephen Gehring, James Larson, Richard Holm, Thomas Huber, Ken Bartholomew, Jeffrey Hagen, K. Gene Koob, Guy Tam, Lowell Hyland, C. Roger Stoltz, Daniel Kennelly, John Sall, Richard Renka, Carol Zielike, Scott Eccarius, Charles Hart, Richard Kafka, James Collins, Ben Henderson, Kevin Bjordahl, Joe Chang, Roger Carter, Steven Feeney, Aaron Shives, Robert Rietz, Mark Belyea, Louis Karlen, Carey Buhler, Michael Haley, Angelina Trujillo, Lawrence Finney, Kristine Lindo, Dana Windhorst, Robert VanDemark, Jr., Jessie Easton, G. F. Gutch, James Ryan, Karla Murphy, William O. Rossing, K-Lynn Paul, Donald Knudson, David Bean, Greg Schroeder, Robert Thompson, Jem Hof, Frank Messner, Julie Stevens, Robert Ferrell, Jeanne Bennett, Tom Hermann, Victoria Herr, Douglas Traub, Richard Porter, Larry Meyer, H. Lee Ahrlin, Michael Elston, O. Myron Jerde, R. G. Nemer, Dale Gunderson, and students Brian Knutson and Eric Kelts.

Dr. Koob moved to approve the minutes of the previous meeting as printed and distributed. The motion was seconded and carried.

Dr. Schroeder announced the appointment of the Nominating Committee as determined by the president, Dr. James Reynolds: Drs. James Hovland, Chairman, Roger Carter, Richard Holm, B.O. Lindbloom, Louis Karlen, Michael Haley, John Sall, Jem Hof, Carole Zielike, Gregg Tobin, John Ottenbacher, and Kevin Bjordahl.

Dr. Schroeder announced the appointment of the Reference Committees as follows: Reference Committee #1 on Credentials, Resolutions and Memorials and Reports of the Officers and Councilors: Drs. Richard Wake, Chairman, G. F. Gutch, H. Lee Ahrlin, James Collins, Larry Meyer, Paul Eckrich, Jeffrey Hanson, Kristine Lindo, Robert Ferrell, Thomas White and Loren Tschetter.

Reference Committee #2 on Reports of Commissions on Medical Service; Legislation and Governmental Relations: Drs. Karla Murphy, Chairman, Jeanne Bennett, Tom Hermann, Aaron Shives, Lowell Hyland, Dana Windhorst, Douglas Holum, Frank Messner, Richard Howard, Henry Travers, Greg Schroeder, Ben Henderson, Raymond Nemer, O. Myron Jerde, and Richard Kafka and student, Brian Knutson.

Reference Committee #3 on Reports of Commissions on Scientific Medicine; Internal Affairs, Communications and Liaison; and Professional Liability: Drs. K. Gene Koob, Chairman, David Bean, Vernon Stensland, James Ryan, Julie Stevens, Stephen Gehring, Angelina Trujillo, Janet Smith, Roger Knutson, Donald Knudson, Robert Van Demark, Jr., Richard Renka, David Elson and Victoria Herr.

Reference Committee #4 on Reports of Special Committees and Miscellaneous Business; Drs. Scott Eccarius, Chairman, K-Lynn Paul, Charles Hart, David Hoversten, Michael Elston, Daniel Kennelly, Mark Belyea, Guy Tam, Jessie Easton, Stephen Billion, Richard Porter, Alan Bloom, Jeffrey Hagen, Carey Buhler, John Barker and Robert Thompson.

Dr. Schroeder referred the report of the Officers and Councilors to Reference Committee #1. Dr. Schroeder called for the introduction of resolutions from the Council which have not been published in the Delegate's handbook. Dr. Holm introduced the following resolution from the Council.

RESOLUTION #7

TO: House of Delegates
South Dakota State Medical Association

FROM: Council
South Dakota State Medical Association

SUBJECT: Commendation to the South Dakota State Medical Association Alliance

BE IT RESOLVED, The South Dakota State Medical Association recognizes and commends the Alliance for their activities on behalf of medicine and the citizens of South Dakota, particularly for their involvement in the development of the Family Violence Campaign, and

BE IT FURTHER RESOLVED, The Association extends its gratitude to Helen Owens, the Alliance president, and to the other officers and members who expended a great deal of time and effort towards the successful implementation of the Family Violence Campaign in the state of South Dakota.

Dr. Schroeder referred this resolution to Reference Committee #1, Credentials, Resolutions and Memorials and Reports of Officers and Councilors.

Resolution #7 was adopted at the Second House of Delegates meeting.

Dr. Schroeder called for introduction of resolutions from district medical societies which have not been published in the Delegate's handbook. Dr. Hart introduced the following resolution from District 9.

RESOLUTION #5

TO: House of Delegates
South Dakota State Medical Association

FROM: Black Hills District (#9) Medical Society

SUBJECT: "Housecalls" program

WHEREAS, the providing of reliable and timely health care information and education to the people of South Dakota is one of the responsibilities of the physicians of South Dakota, and

WHEREAS, the Public Broadcasting System in South Dakota provides television access to programming throughout the state of South Dakota, and

WHEREAS, the "Housecalls" program has been developed to provide information on health care, utilizing and under the editorial control of the physicians of South Dakota, and

WHEREAS, this program is being cost effectively produced at a total cost of \$75,000 per

13 programs funded entirely from donations from physician groups and individuals, hospitals and clinics, therefore

BE IT RESOLVED, That the House of Delegates of the South Dakota State Medical Association commend Dr. Richard Holm and his associates for developing this concept, and

BE IT FURTHER RESOLVED, That the House of Delegates of the South Dakota State Medical Association enthusiastically support this project, and

BE IT FURTHER RESOLVED, That the House of Delegates of the South Dakota State Medical Association directs the administrative staff to provide (1) a direct mail solicitation to all the members of the South Dakota State Medical Association for their individual contributions to this project (2) direct mail solicitation to all clinic managers throughout the state of South Dakota for their financial support (3) direct discussion with the South Dakota State Hospital Association, soliciting their financial support for this project and (4) direct contact with all hospitals and health insurance companies requesting their financial support for this project.

Dr. Schroeder referred this resolution to Reference Committee #3, Reports of Commissions on Scientific Medicine; Internal Affairs, Communications and Liaison and Professional Liability.

Resolution #5 was adopted at the Second House of Delegates meeting.

Dr. Carter introduced the following resolution from District 2.

RESOLUTION #3

TO: House of Delegates
South Dakota State Medical Association

FROM: Watertown District Medical Society

SUBJECT: Recognition of Dr. G. Robert Bartron

WHEREAS, Dr. G. Robert Bartron has served the community of medicine in Watertown, South Dakota, faithfully for 50 years, and

WHEREAS, Dr. Bob Bartron has served in the South Dakota Legislature representing South Dakota at the most important time of the development of a four year Medical School and was most influential in its development, and

WHEREAS, he has served as Chief of Staff of the two pre-existing hospitals in Watertown, and

WHEREAS, he has served as the Industrial Development Director and President of the Chamber of Commerce for the city of Watertown, and

WHEREAS,

he has exhibited family influence and has received family support from his wife and family, and

WHEREAS,

he has served the Bartron Clinic, his colleagues, and his patients with caring and with dignity, therefore

BE IT RESOLVED, That the State Medical Association recognizes the tremendous contributions of Dr. G. Robert Bartron to his State, to his profession, and to his community, and congratulates him for this service, and extends our best wishes for the future.

Dr. Schroeder referred this resolution to Reference Committee #1, Credentials, Resolutions and Memorials and Reports of Officers and Councilors.

Resolution #3 was adopted at the Second House of Delegates meeting.

Dr. Shives introduced the following resolution from District 2.

RESOLUTION #4

TO: House of Delegates
South Dakota State Medical Association

FROM: Watertown District Medical Society

SUBJECT: Recognition of Dr. T. J. Wrage, Jr.

WHEREAS, Dr. Theodore J. Wrage has practiced medicine for 38 years in the Watertown District Medical Society, and

WHEREAS, he has served on many state committees and as Chairman of the Political Action Committee for the State Medical Association, and

WHEREAS, he has served the District Medical Society as its President and also as Secretary for many years, and

WHEREAS, he has served his medical community as Chief of Staff of each of the hospitals before they were combined, and also as Chief of Staff at Prairie Lakes Health Care Center, and

WHEREAS, he has served as State President of the Junior Chamber of Commerce, the Chamber of Commerce and on multiple other community committees, and

WHEREAS, he has served his family well and has received the support of his wife and children, and

WHEREAS, he has served the Brown Clinic, his colleagues and his patients with caring and with dignity, therefore

BE IT RESOLVED, That the South Dakota State Medical Association, in conjunction with the Watertown District Medical Society, recognizes his contributions, congratulates him and extends our gratitude for his service to medicine and his community. We wish him the very best in his retirement.

Dr. Schroeder referred this resolution to Reference Committee #1, Credentials, Resolutions and Memorials and Reports of Officers and Councilors.

Resolution #4 was adopted at the Second House of Delegates meeting.

Dr. Rietz introduced the following resolution from District 3.

RESOLUTION #6

TO: House of Delegates
South Dakota State Medical Association

FROM: Third District Medical Society

SUBJECT: Woman Chaperone for Male Physician
Examining a Female Patient

WHEREAS, The tradition of medical ethics is to expect a male physician to have a female chaperone in the examining room during times when the female patient is having a breast or pelvic exam or at times when it is deemed important to give the patient a sense of protection or comfort, and

WHEREAS, There has been South Dakota legislative action, albeit unsuccessful, to require male physicians by law to have a chaperone in such instances, or to have permission not to have a chaperone, and

WHEREAS, The patient by existing law and tradition already has the right to request a chaperone during such an exam, and

WHEREAS, Such ethical issues should not require legislative action or legal action on a principle that is already ethically a standard for physicians, and

WHEREAS, When laws are already in place which serve to address unethical conduct by physicians where this trust is betrayed, and

WHEREAS, The South Dakota State Medical Association and the Third District Medical Society desire to respond to the concerns expressed by many people and by the state legislature, and

WHEREAS, Some patients may need education to understand they are already empowered to request a chaperone when one is not offered and when it is deemed needed, therefore

BE IT RESOLVED, That the South Dakota State Medical Association and the Third District Medical Society would establish a policy to educate female patients that they have the right to request a chaperone during any exam with their physician, and if one is not provided, then the patient has the right to refuse treatment or service, and

BE IT FURTHER RESOLVED, That this education effort includes a notice to be placed in

physician examining rooms such as that appended, and that the South Dakota State Medical Association make a public relation effort to inform people of this right.

ATTENTION ALL FEMALE PATIENTS

In the best tradition of medical ethics, during times when a female patient is having a breast or pelvic exam, male physicians may either have a female chaperone in the examining room or have permission by the patient that one is unnecessary.

As our patient, you are empowered to request a chaperone if one is not offered. If one is not provided, you have the right to refuse treatment or service.

PROVIDED IN COOPERATION WITH YOUR PHYSICIAN AND
THE SOUTH DAKOTA STATE MEDICAL ASSOCIATION.

Dr. Schroeder referred this resolution to Reference Committee #4, Reports of Special Committees and Miscellaneous Business.

Resolution #6 was referred to a Commission for study; and if it is determined that a resolution addressing this issue is appropriate, it be developed and referred to the Council for introduction at the 1996 House of Delegates meeting.

Dr. Schroeder called for introduction of resolutions by individual members which have not been published in the Delegate's handbook.

Dr. Bean introduced the following resolution:

RESOLUTION #8

TO: House of Delegates
South Dakota State Medical Association

FROM: David Bean, MD

SUBJECT: Informed Consent for ECT

BE IT RESOLVED, The Council of the South Dakota State Medical Association address the issue of informed consent for ECT.

Dr. Schroeder referred this resolution to Reference Committee #2, Reports of Commissions on Medical Service; and Legislation and Governmental Relations.

Resolution #8 was adopted at the Second House of Delegates meeting.

Dr. Schroeder referred pages 1-15 of the Delegate's handbook to the Reference Committee on Credentials, Resolutions and Memorials and Reports of Officers & Councilors.

Dr. Schroeder referred pages 16 - 19A including Commissions on Legislation and Governmental Relations; and Medical Service and Resolutions #1 and #2 to Reference Committee #2.

RESOLUTION #1

TO: House of Delegates
South Dakota State Medical Association

FROM: David Hoversten, MD

SUBJECT: Managed Care Plans

WHEREAS, the South Dakota State Medical Association in 1994 voted to support and push for any willing provider laws for South Dakota state providers, and

WHEREAS, this was changed by individuals in charge of this resolution to a point of service option which was either killed or tabled to a summer study, and

WHEREAS, managed care is increasingly penetrating South Dakota, and

WHEREAS, we are rapidly approaching the time when physicians may be deselected from managed care panels, and

WHEREAS, the AMA has adopted resolutions to support state and county efforts on behalf of member physicians who are deselected by managed care plans, therefore

BE IT RESOLVED, That the South Dakota State Medical Association pledge its support to member physicians who are deselected by managed care plans for other than quality reasons.

Resolution #1 was referred to the Council for further study and consideration of introduction to the 1996 House of Delegates.

RESOLUTION #2

TO: House of Delegates
South Dakota State Medical Association

FROM: R. J. Bareis, MD

SUBJECT: Tax Reform

WHEREAS, the memory of the 1995 legislative fiasco in attempting to balance the budget through a variety of tax changes is still fresh in our minds, and

WHEREAS, the social, educational and material needs of our citizens are only marginally being met now, and

WHEREAS, anticipated reduction in federal funding to states will put an added strain on South Dakota resources to meet those needs, and

WHEREAS, our present tax structure is unbalanced with excessive dependence on property tax and proposed greater use of regressive, unjust sales taxes (eventually to include a medical provider tax), and

WHEREAS, it is unlikely that additional cuts in government programs and staffing will free sufficient resources to meet our needs, and

WHEREAS, future legislative sessions portend a repetition of our recent experience, therefore

BE IT RESOLVED, That the Council of the South Dakota State Medical Association be directed to take a leadership role in joining with like-minded progressive groups including moderate members of both political

parties, to encourage the development of a constructive, reasonably equitable tax reform legislation which might include a fair state income tax with constitutional safeguards. (Reference: Rapid City Journal, editorial, April 2, 1995)

Resolution #2 as submitted was rejected at the Second House of Delegates meeting and the following replacement resolution was accepted as follows "Resolved, that the Council of the South Dakota State Medical Association be directed to take a leadership role in tax reform legislation".

Dr. Schroeder referred pages 20 - 23 including the reports of the Commissions on Scientific Medicine; Internal Affairs, Communications and Liaison; and Professional Liability to Reference Committee #3.

Dr. Schroeder referred pages 24 - 27 including the reports of the Continuing Medical Education Commission, the Budget and Audit Committee, Grievance Commission, South Dakota Political Action Committee, Board of Directors of the South Dakota Medical School Endowment Association, Physicians' HELP Committee, Archives and History Commission and State Health Advisory Council to Reference Committee #4.

Dr. Reynolds, State Association President, presented a resolution from the Council and plaques to Dr. Jerome Freeman and Dr. John Barlow, co-editors of the SOUTH DAKOTA JOURNAL OF MEDICINE. The resolution is as follows:

RESOLUTION OF COMMENDATION

WHEREAS, John F. Barlow, MD, and Jerome W. Freeman, MD, became co-editors for the South Dakota Journal of Medicine in January 1991, and

WHEREAS, both have dedicated a great deal of time and effort towards the improvement and growth of the Journal, and

WHEREAS, both have contributed editorials on a monthly basis and have generated other articles of interest to the South Dakota physicians, and

WHEREAS, both have served on a volunteer basis offering their expertise without compensation, therefore be it

RESOLVED, The South Dakota State Medical Association recognizes and commends Dr. John F. Barlow and Dr. Jerome W. Freeman for their dedicated service and their diligent efforts to enhance the South Dakota Journal of Medicine and to make it a voice for South Dakota physicians and a successful, self-sustaining publication of the South Dakota State Medical Association.

Dr. Schroeder announced the various business, scientific and social events which are scheduled throughout the annual meeting. There being no further business, the meeting adjourned at 10:00 am.

MINUTES SECOND HOUSE OF DELEGATES

10:00 am Washington Room, Ramkota Inn
Saturday, June 10, 1995 Sioux Falls, South Dakota

The meeting was called to order at 10:00 am, by Stephan Schroeder, MD, Speaker of the House. Those present for roll call were Drs. James R. Reynolds, Mary S. Carpenter, James A. Engelbrecht, Rodney R. Parry, Stephan Schroeder, Richard P. Holm, Michael W. Pekas, Thomas L. Krafka, James Hovland, Paul Eckrich, Stephen Gehring, James Larson, Richard Wake, Thomas Huber, Kenneth Bartholomew, Jeff Hansen, Jeff Hagen, K. Gene Koob, Guy Tam, Lowell Hyland, C. Roger Stoltz, Daniel Kennelly, Richard Renka, Carol Zielike, Scott Eccarius, Charles Hart, Gregg Tobin, Richard Kafka, James Collins, Ben Henderson, Joe Chang, Roger Carter, Steven Feeney, Aaron Shives, Mark Belyea, Louis Karlen, Carey Buhler, Michael Haley, Angelina Trujillo, Dana Windhorst, Robert VanDemark, Jr., Jessie Easton, James Ryan, Karla Murphy, David Elson, K-Lynn Paul, Donald Knudson, David Bean, Henry Travers, Greg Schroeder, Robert Thompson, Frank Messner, Jem Hof, Robert Ferrell, Thomas Hermann, Victoria Herr, Douglas Traub, Richard Porter, Larry Meyer, H. Lee Ahrlin, Michael Elston, O. Myron Jerde, Dale Gunderson and R.G. Nemer. A quorum was present and the meeting was declared competent to proceed.

A motion was made to dispense with the reading of the minutes of the previous meeting inasmuch as they will be printed and distributed. The motion was seconded and carried.

Dr. James Hovland read the Report of the Nominating Committee.

REPORT OF THE NOMINATING COMMITTEE

The Nominating Committee submits the following recommendations for the consideration of the House of Delegates:

OFFICERS

President-Elect	James Engelbrecht, MD
Vice President	Stephan Schroeder, MD
Speaker of the House	Stephen Gehring, MD

COUNCILORS

Aberdeen District #1	Paul Eckrich, MD (3 years)
Watertown District #2	James Larson, MD (3 years)
Brookings/Madison Dist #3	Richard Holm, MD (3 years)
Pierre District #4	Philip Hoffsten, MD (3 years)
Huron District #5	Howard Saylor, MD (3 years)
Sioux Falls District #7	K. Gene Koob, MD (3 years)
	Robert Raszkowski, MD (3 years)
	Loren Tschetter, MD (3 years)
Yankton District #8	Bruce Mannes, MD (3 years)
	Jem Hof, MD (2 years)
Black Hills District #9	Charles Hart, MD (3 years)
	Dave Johnson, MD (3 years)

ALTERNATE COUNCILORS

Watertown District #2	Ken Peterson, MD (3 years)
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Brookings/Madison Dist #3	Ronold Tesch, MD (3 years)
Pierre District #4	Kenneth Bartholomew, MD (3 yrs)
Sioux Falls District #7	Angelina Trujillo, MD (3 years)
	Khristine Lindo, MD (3 years)
	J. Michael McMillin, MD (3 years)
	David Rossing, MD (2 years)
	Dana Windhorst, MD (2 years)
Yankton District #8	Herb Saloum, MD (3 years)
Black Hills District #9	Craig Hansen, MD (3 years)

Annual Meeting Site

1996 - Rapid City, SD	June 6-8, 1996
1997 - Sioux Falls, SD	June 5-7, 1997
1998 - Rapid City, SD	June 4-6, 1998

Respectfully submitted,

NOMINATING COMMITTEE James Hovland, MD, Chairman

Roger Carter, MD
Richard Holm, MD
Louis Karlen, MD
Michael Haley, MD
John Sall, MD
Jem Hof, MD
Carol Zielike, MD
Gregg Tobin, MD

A motion was made to accept the Report of the Nominating Committee. The motion was seconded and carried.

Dr. Robert McAfee, AMA President was introduced and briefly spoke to the House of Delegates.

Dr. Richard Wake read the Report of the Reference Committee on Credentials, Resolutions and Memorials and Reports of Officers and Councilors.

REPORT OF THE REFERENCE COMMITTEE ON CREDENTIALS, RESOLUTIONS AND MEMORIALS AND REPORTS OF OFFICERS AND COUNCILORS

The following delegates, alternate delegates, officers and councilors of the South Dakota State Medical Association were present: Doctors James Reynolds, Mary Carpenter, James Engelbrecht, Stephan Schroeder, Richard Holm, Michael Pekas, Thomas Krafka, James Hovland, Paul Eckrich, Stephen Gehring, James Larson, Richard Holm, Thomas Huber, Ken Bartholomew, Jeffrey Hagen, K. Gene Koob, Guy Tam, Lowell Hyland, C. Roger Stoltz, Daniel Kennelly, John Sall, Richard Renka, Carol Zielike, Scott Eccarius, Charles Hart, Richard Kafka, James Collins, Ben Henderson, Kevin Bjordahl, Joe Chang, Roger Carter, Steven Feeney, Aaron Shives, Robert Rietz, Mark Belyea, Louis Karlen, Carey Buhler, Michael Haley, Angelina Trujillo, Lawrence Finney, Khristine Lindo, Dana Windhorst, Robert VanDemark, Jr., Jessie Easton, C. F. Gutch, James Ryan, Karla Murphy, William O. Rossing, K-Lynn Paul, Donald Knudson, David Bean, Greg Schroeder, Robert Thompson, Jem Hof, Frank Messner, Julie Stevens, Robert Ferrell, Jeanne Bennett, Tom Hermann, Victoria Herr, Douglas

Traub, Richard Porter, Larry Meyer, H. Lee Ahrlin, Michael Eiston, O. Myron Jerde, R. G. Nemer, Dale Gunderson, and students Brian Knutson and Eric Kelts.

A quorum was present for the meeting of the House of Delegates. Total registration for the convention is 197, including 129 physicians, 15 guests, 53 Alliance members, and 53 sponsoring companies.

The reference committee reviewed the reports of the officers and councilors and recommends they be accepted as submitted.

The reference committee reviewed Resolution #3 - recognition of Dr. G. Robert Bartron, Resolution #4 - recognition of Dr. T. J. Wrage, Jr., and Resolution #7 - commendation to the South Dakota State Medical Association Alliance and unanimously supports all three resolutions and recommends their approval.

The reference committee submits the following resolution for the consideration of the House of Delegates:

WHEREAS, numerous people have been involved in planning, arranging and ensuring the success of the 1995 annual meeting of the South Dakota State Medical Association,

BE IT RESOLVED, That the State Medical Association extend its appreciation and thanks to the Seventh District physicians and the Seventh District, Watertown District, Brookings-Madison and Whetstone Valley District Alliances for their endeavors, and

BE IT RESOLVED, That the State Medical Association extend its thanks to the management of the Ramkota Inn, Elmwood Golf Course, Valley West and Westward Ho Country Club for their excellent facilities and staff, and

BE IT RESOLVED, That the State Medical Association extend its thanks to the Sioux Falls Argus Leader, KEL0-TV, KSFY-TV, KDLT-TV, KSOO, KELO and KXRB radio for publicizing this event, and

BE IT RESOLVED, That the State Medical Association extend special gratitude to the sponsoring companies for their support and participation, and

BE IT FURTHER RESOLVED, That \$100 be donated to the South Dakota Medical School Endowment Association in memory of each of the following physicians who died during the past year:

Bernard Clark, MD - Spearfish
George Wyatt, MD - Sioux Falls
Clifford Lardinois, MD - Huron
Roy C. Knowles, MD - Sioux Falls
Melford Lyso, MD - Yankton
Donald Scheller, MD - Arlington
Murlin Merryman, MD - Rapid City
Edward T. Ruud, MD - Rapid City
Robert Branch, MD - Rapid City
Theodore Angelos, MD - Canton
Kendall Burns, MD - Sioux Falls

Respectfully submitted,
**REFERENCE COMMITTEE ON
CREDENTIALS, RESOLUTIONS, AND
MEMORIALS AND REPORTS OF
OFFICERS AND COUNCILORS**

Richard Wake, MD, Chairman
C. F. Gutch, MD
H. Lee Ahrlin, MD
James Collins, MD
Larry Meyer, MD
Paul Eckrich, MD
Jeffrey Hanson, MD
Christine Lindo, MD
Robert L. Ferrell, MD
Robert Rietz, MD

A motion was made to accept the Report of the Reference Committee on Credentials, Resolutions and Memorials and Reports of Officers and Councilors. The motion was seconded and carried.

Dr. Karla Murphy read the Report of the Reference Committee on Reports of the Commission on Medical Service and the Commission on Legislation and Governmental Relations.

**REPORT OF THE REFERENCE COMMITTEE ON
REPORTS OF THE COMMISSION ON MEDICAL
SERVICE AND THE COMMISSION ON
LEGISLATION AND GOVERNMENTAL RELATIONS**

The Reference Committee reviewed the report of the Commission on Medical Service and recommends acceptance of this report.

The Reference Committee reviewed the report of the Commission on Legislation and Governmental Relations and recommends acceptance of this report.

The Reference Committee recommends that Resolution #1 entitled Managed Care Plans, be referred to the Council for further study and consideration of introduction to the 1996 House of Delegates meeting.

The Reference Committee recommends that Resolution #2 entitled Tax Reform, be rejected as written and recommends that replacement Resolution #2 as follows be approved:

BE IT RESOLVED, that the Council of the South Dakota State Medical Association be directed to take a leadership role in tax reform legislation.

The Reference Committee considered Resolution #8 entitled Informed Consent for ECT, and recommends that it be approved.

The Reference Committee discussed the annual meeting fees and recommends adoption of the following resolution:

BE IT RESOLVED, That the Council of the South Dakota State Medical Association review the registration fee structure for the 1996 Annual Meeting and specifically consider individual event tickets as financially feasible.

Respectfully submitted,
**REFERENCE COMMITTEE ON REPORTS OF
COMMISSIONS ON MEDICAL SERVICE;
LEGISLATION AND GOVERNMENTAL RELATIONS**

Karla Murphy, MD, Chairman
Frank Messner, MD
Ben Henderson, DO
Aaron Shives, MD

R.G. Nemer, MD
 Dana Windhorst, MD
 Richard Kafka, MD
 Tom Hermann, MD
 Henry Travers, MD
 O. Myron Jerde, MD
 Louis Karlen, MD
 Jim Engelbrecht, MD
 John Sall, MD
 Jim Reynolds, MD
 David W. Bean, MD
 R.J. Bareis, MD
 Brian Knutson

A motion was made to accept the Report of the Reference Committee on Reports of the Commission on Medical Service and the Commission on Legislation and Governmental Relations. The motion was seconded and carried.

Dr. K. Gene Koob read the Report of the Reference Committee on Reports of the Commissions on Scientific Medicine; Internal Affairs, Communications and Liaison; and Professional Liability.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF THE COMMISSION ON SCIENTIFIC MEDICINE; INTERNAL AFFAIRS, COMMUNICATIONS AND LIAISON; AND PROFESSIONAL LIABILITY

The Reference Committee reviewed the report of the Commission on Scientific Medicine. The Reference Committee recommends acceptance of this report.

The Reference Committee reviewed the report of the Commission on Internal Affairs, Communications and Liaison. The Reference Committee recommends acceptance of this report.

The Reference Committee reviewed the proposed Budget for the fiscal year 1995 - 1996. The Reference Committee recommends acceptance of this report.

The Reference Committee reviewed the report of the Commission on Professional Liability. The Reference Committee recommends acceptance of this report.

The Reference Committee reviewed Resolution #5 from the Black Hills Medical Society regarding the "Housecalls" program. The Reference Committee recommends acceptance of Resolution #5.

Respectfully submitted,

REFERENCE COMMITTEE ON REPORTS OF THE COMMISSIONS ON SCIENTIFIC MEDICINE; INTERNAL AFFAIRS, COMMUNICATIONS AND LIAISON; AND PROFESSIONAL LIABILITY

K. Gene Koob, MD, Chairman
 Julie Stevens, MD
 Angelina Trujillo, MD
 Richard Renka, MD
 David Elson, MD
 Victoria Herr, MD
 Dale Gunderson, MD
 Richard Holm, MD

Dr. Koob, from the floor of the House, suggested that the Medical Association office include in its solicitation letter, the scheduled dates and times of the "Housecalls" program. In this way, the membership will be able to see one or two of the programs prior to making a decision.

A motion was made to accept the Report of the Reference Committee on Reports of the Commissions on Scientific Medicine; Internal Affairs, Communications and Liaison; and Professional Liability. The motion was seconded and carried.

Dr. Scott Eccarius read the report of the Reference Committee on Reports of Special Committees and Miscellaneous Business.

REPORT OF THE REFERENCE COMMITTEE ON REPORTS OF SPECIAL COMMITTEES AND MISCELLANEOUS BUSINESS

The Reference Committee considered the reports of the Continuing Medical Education Commission, the Budget and Audit Committee, the Grievance Commission, the South Dakota Political Action Committee, the Board of Directors of the South Dakota Medical School Endowment Association, the Physicians' HELP Committee, the Archives and History Commission and the State Health Advisory Council and recommends approval of these reports.

The Reference Committee considered Resolution #6 entitled "Woman Chaperone for Male Physician Examining a Female Patient". The Reference Committee recommends Resolution #6 be referred to the appropriate Commission for study and consideration; and if it is determined that a resolution addressing this issue is appropriate, it be developed and referred to the Council for introduction at the 1996 House of Delegates' meeting.

Respectfully submitted,

REFERENCE COMMITTEE ON REPORTS OF SPECIAL COMMITTEES AND MISCELLANEOUS BUSINESS

Scott Eccarius, MD, Chairman
 K-Lynn Paul, MD
 David Hoversten, MD
 Michael Elston, MD
 Daniel Kennelly, MD
 Mark Belyea, MD
 Guy Tam, MD
 Jessie Easton, MD
 Richard Porter, MD
 Jeffrey Hagen, MD
 Carey Buhler, MD
 Robert Thompson, MD
 C. Roger Stoltz, MD
 Joe Chang, MD

A motion was made to accept the Report of the Reference Committee on Reports of Special Committees and Miscellaneous Business. The motion was seconded and carried.

Dr. Mary Carpenter was installed as president of the South Dakota State Medical Association and briefly addressed the House of Delegates. The presidential address was followed by introduction of the new officers.

There being no further business, the meeting adjourned at 11:00 am.

Combination Therapy for NIDDM: Has its Time Arrived?

Jennifer Menke, Pharm.D, Sioux Falls, SD.

Standard therapy for non-insulin dependent diabetes mellitus (NIDDM) has long consisted of diet, exercise and oral hypoglycemic agents. Until the recent introduction of metformin in the United States, the only available oral hypoglycemic agents were the sulfonylureas. Unfortunately, sulfonylurea therapy is ineffective in about 20% of patients newly diagnosed with NIDDM. Another 5%-10% of initial responders fail sulfonylurea therapy each year.¹ For those who fail to achieve adequate control with diet, exercise and sulfonylureas, insulin therapy is often the next option. A reasonable step between sulfonylureas and insulin would seem to be a combination of these two therapies. Several questions remain, however, regarding the use of these agents together. What are the advantages of combination therapy over insulin monotherapy? Which patients are most likely to benefit from combination therapy? And the ultimate question might be: Is combination therapy an idea whose time has come or is it one that is best forgotten?

The exact mechanism of action of the sulfonylureas has been debated for several years. Sulfonylureas are known to increase the secretion of insulin from the pancreas. The question remains, however, if this is the only action of the sulfonylureas. Other proposed effects include reduction in the rate of hepatic glucose production, partial reversal of the postreceptor insulin defect and an increase in insulin receptors.² Although these extrapancreatic effects have been proven *in vitro* and in animal studies, it is unknown exactly what, if any, role they play in the effectiveness of the sulfonylureas in humans. If these extrapancreatic effects do occur, then the use of combination therapy would make great physiologic sense. If the extrapancreatic effects of sulfonylureas do not contribute to their efficacy, there still could be a potential benefit from combination therapy. The sulfonylureas increase endogenous insulin secretion which might allow a decrease in the amount of exogenous insulin need for adequate glucose regulation. As hyperinsulinemia has been postulated to contribute to atherosclerosis, any decrease in insulin dosage would theoretically be beneficial. This theoretical advantage may still not be obtained, however, if the sulfonylurea is acting by increasing insulin secretion.²

The body of literature about combination therapy is substantial. Over the years there have been over one hundred clinical trials done to evaluate the efficacy of this treatment. The results from these studies have been mixed. The difficulty in evaluating these trials lies

in the fact that most of the studies were relatively small, some were uncontrolled and many different treatment regimens. Even the meta-analyses that have been performed have had differing conclusions. One meta-analysis published in 1991 concluded that the improvement seen with combination therapy was insignificant and therefore combination therapy should not be used.³ Another meta-analysis published in 1992 concluded that the improvement may be modest but the use of combination therapy is probably warranted in the obese patient with NIDDM.³ Although the results of many of these trials were not overwhelmingly favorable, there did appear to be a subpopulation of patients who did have a significant improvement in glycemic control. Review of the characteristics of these responders, however, did not demonstrate clearly which patients would be most likely to benefit from combination therapy.

More recent studies of combination therapy have used a different treatment regimen referred to as BIDS (bedtime insulin plus daytime sulfonylurea). The aim of BIDS therapy is to address two physiologic defects found in NIDDM. First, the increase in hepatic glucose production which can be corrected by a bedtime dose of intermediate acting insulin. Second, decreased peripheral glucose utilization which may be corrected by oral hypoglycemic agents. Also, this treatment regimen may cause less hypoglycemic episodes because the insulin, given late at night, will not peak until the next morning. This form of combination therapy is also easy for the patient as it requires only one injection of insulin. Several studies have demonstrated improved glycemic control with BIDS therapy, however, these studies tended to be of short duration and small in nature.^{4,5} Whether BIDS therapy will be of great benefit to most patients with NIDDM remains to be seen.

Although there are still many questions regarding the use of combination therapy, it does seem to be a reasonable alternative for certain patients. Discovering just which patients will have a significant response requires careful monitoring and follow up. If a patient does not respond to the combination within a reasonable amount of time, the attempt should be chalked up to experience and a new treatment started. Other treatment options include insulin monotherapy, metformin or a combination of metformin plus a sulfonylurea. Regardless of the treatment chosen, it is important to remember that diet, exercise and educa-

tion will continue to be of central importance in the care of the patient with non-insulin dependent diabetes mellitus.

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SDSU

Edited by Brian Kaatz, Pharm.D.



SDSU

PRESIDENTIAL OATH OF OFFICE

I SOLEMNLY SWEAR THAT I shall carry out the duties of the President of the South Dakota State Medical Association to the best of my ability. I shall strive constantly to maintain the ethics of the medical profession and to promote the public health and welfare. I shall dedicate myself and my office to improving health standards and to the task of bringing increasingly improved medical care to the people of South Dakota. I shall uphold the Constitution and Bylaws of the AMA and the South Dakota State Medical Association. I shall champion the cause of freedom in medical practice and freedom for all my fellow Americans.

I do solemnly swear that I will discharge the duties of this office to the best of my ability, so help me God.

REPORT OF THE PRESIDENT AND CHAIRMAN OF THE EXECUTIVE COMMISSION

I was told last June that the year would pass quickly and these words were truly prophetic. Certainly the highlight for me this past year was the opportunity to visit each of the twelve medical districts. I was able to renew old friendships and meet many new members of the Association and the Medical Alliance. Certainly those districts who meet jointly with the alliance share a special relationship that is complimentary for both groups, and this should become the model for all districts in the future.

As medical system reform passed this year from governmental control to a free enterprise system, we have seen incremental state model reform come to the forefront. South Dakota has experienced these changes, particularly in the higher population areas. These include limited panel managed care groups, HMO, PPO and other alignment of physician and non-physician providers. Certainly we are fortunate in South Dakota to have physician and patient sensitive groups such as Blue Shield of South Dakota and DakotaCare, who offer freedom of choice for patients through extensive physician and institutional providers.

Freedom of choice in fact was the main emphasis of last year's House of Delegates meeting. With the direction to pursue an "any willing provider law" in South Dakota, the Council, after careful discussion, introduced a bill offering "point of service" coverage for all managed care products offered in the state. With this point of service bill, freedom of choice would have been guaranteed to all patients with a limited affordable out of pocket cost. Unfortunately, this bill met with significant opposition from the insurance industry and governmental departments and was subsequently referred for summer legislative study.

Certainly the most divisive issue for the Association this year was the legislative proposal of a 4% provider tax. Although subsequently repealed, it demanded most of the energy of the legislative body. Other issues of importance to the Association, such as the point of service bill and a cap on medical malpractice awards for non-economic damages, were defeated. Overall, however, the legislative session proved successful in that 23 of the 26 issues on which the Association took positions were sustained. On behalf of the Association, I would like to again extend a special appreciation for the strong efforts of Dean Krogman and Dave Gerdes in the recent legislative session.

With the changes occurring in medical delivery in South Dakota, the goal of the Medical Association must be to provide leadership to all of our physicians whether in solo practice, group practice, academic practice or whether rural or urban. At the same time, we must keep the health and well-being of our patients as our top priority.

As I leave office, I want to extend a special thank you to all of those members of the Medical Association organization who have been helpful in this past year. Jeri Spars, who makes the Journal of the South Dakota State Medical Association "work", has been extremely patient with my last minute endeavors. Certainly, Stephanie, Jan, Bob and Paul have been extremely supportive and helpful. It has been a special year working closely with Bob. As many of you know, we were childhood and high school friends whose lives then took separate paths upon completion of high school only to pick up again upon my return to South Dakota. For 29 years, Bob has spoken strongly for the physicians of South Dakota and is truly our strongest advocate.

As the year ends the journey of medicine continues and will continue under the able leadership of Dr Mary Carpenter. I wish her the very best for the coming year.

Respectfully submitted,

James R. Reynolds, MD

President

The Reference Committee reviewed the report of the President and Chairman of the Executive Commission and recommended it be accepted as submitted.

REPORT OF THE PRESIDENT ELECT

This was not a boring year for the SDSMA, and I am glad that Dr Reynolds was the president. This gave me a year to observe a true leader and, hopefully, learn a lot in preparation for the upcoming year.

I think that the entire year has been overshadowed by the controversy caused by the introduction of the provider tax in the legislature. The opposition mounted by the Medical Association to that tax was great and, in the end, some bad legislation was defeated. This issue took up a great deal of time for the Executive Commission and for our lobbyists. Dealing with the legislative process is certainly an educational experience. I believe that all of us need to become more educated in that whole process so that we, as physicians, can be significant players in the health care reform process. At the last Council meeting in March, it was decided to offer educational opportunities to our members and thereby enable us to deal more effectively in the legislative process. I hope this will make us an even stronger voice in Pierre in years to come.

In March, I represented the SDSMA at the annual AMA Leadership Conference in Washington, DC. This provided a very exciting opportunity to meet with other leaders of the AMA and state associations. Several leaders of Congress spoke at the meeting, including Representative Gingrich, Senator Daschle and Senator Frist, MD. This meeting occurred just at the time that the House was passing the cap on non-economic damages for malpractice suits. The members of the House expressed their thanks for the involvement of the physicians around the country to get this legislation passed. This reinforced to me the need for physicians to be involved in the political process. Senator Frist also encouraged other physicians to be active politically so that we can improve the health care reform process.

Another important issue that was discussed at length was the changes with HMOs, PPOs, PHOs, etc. So often I heard physicians at this meeting wishing they were involved in an organization in which they had control. This made me even more aware of how lucky we are in South Dakota to be the decision-makers in DakotaCare.

It has been an interesting and sometimes difficult year. I am extremely lucky to have had such fine people to use as role models as our President and Past President. I hope that I can continue the leadership of Drs Reynolds and Krafka in the coming year.

Respectfully submitted,
Mary Carpenter, MD
President Elect

The Reference Committee reviewed the report of the President-Elect and recommended it be accepted as submitted.

REPORT OF THE VICE PRESIDENT

It's been my pleasure to serve as Vice President of the South Dakota State Medical Association for the past year. In that capacity I have enjoyed working closely with our President, Dr Reynolds, and President Elect, Dr Carpenter and the other members of the Executive Commission in overseeing the function of the South Dakota State Medical Association. As an active participant in the Council, I have been involved in many of the patient advocacy, legislative and other health care issues. I have also completed my second year of membership on the Medical Advisory Committee for

Medicaid for the State Department of Social Services. In that capacity I have served as liaison between the physicians in this state and the various Medicaid programs.

I appreciate very much the opportunity given to me to serve as your Vice President.

Respectfully submitted,
James A. Engelbrecht, MD
Vice President

The Reference Committee reviewed the report of the Vice President and recommended it be accepted as submitted.

REPORT OF THE SECRETARY TREASURER

This has been a year of medical headlines for the newspapers of South Dakota. Nearly all of the featured stories reflected social issues or medical costs, both of which seem so prominent in the 90's. In some ways, the physician providing quality care to patients seems further removed than ever from the public perception of medicine. This dichotomy creates an enormous challenge to the South Dakota State Medical Association. I believe our members have responded well through involvement in the electoral process, educational forums and personal interaction. I am certain that the Executive Director, staff and officers of your organization do appreciate your input.

A special program, which was started this year, deserves to be underscored. All of the freshmen medical students of the University of South Dakota School of Medicine are members of the South Dakota State Medical Association and the American Medical Association, thanks to the generosity of many physicians. The students are highly appreciative and I am hopeful we can continue this endeavor.

Respectfully submitted,
Rodney R. Parry, MD
Secretary/Treasurer

The Reference Committee reviewed the report of the Secretary Treasurer and recommended it be accepted as submitted.

REPORT OF THE CHAIRMAN OF THE COUNCIL

Officers elected and seated during the year include: President, James Reynolds, MD; President-Elect, Mary Carpenter, MD; Vice President, James Engelbrecht, MD; Secretary-Treasurer, Rodney Parry, MD; AMA Delegate, Michael Pekas, MD; AMA Alternate Delegate, Thomas Krafka, MD; Chairman of the Council, Richard Holm, MD; Speaker of the House of Delegates, Stephan Schroeder, MD; and Councilor at Large, Thomas Krafka, MD.

It is the opinion of this chairman that there were FOUR MAJOR ISSUES the Council had to wrestle with during this one year period.

1. DakotaCare and "any willing provider" legislation

Because there was concern among doctors about DakotaCare's DHP product being closed ended and therefore not allowing all SDSMA members to participate, after considerable debate the Council responded in good faith with a recommendation to develop "any willing provider" legislation.

In subsequent Council meetings, this was expanded to include the AMA refined "Patient Freedom of Choice Act" which allows the patient the option to step out of an exclusionary insurance plan with a nonpunitive point of service option.

This would insure the patient his or her choice of physician. Draft legislation for a patient protection act was prepared using the AMA's draft with modifications for South Dakota. Included in this were requirements for managed care plans to meet reasonable standards. Despite our lobbyist's efforts, this bill was not successful in the 1995 session.

2. Medicaid pilot program

The Council monitored the Medicaid pilot program throughout the year through our representative, Dr Jim Engelbrecht, who sits on the Medicaid Advisory Committee. What had started in Watertown in 1993 spread to Brookings and Huron and in June began in Sioux Falls. At the September 1994 Council meeting concern was expressed regarding problems with emergency care and the gatekeeper method that was being utilized. The Council suggested a study to determine if it is saving money and how patients and physicians feel about this program. Affected Codington County physicians' comments were compiled and shared with the Council. The Council requested that the Medicaid project not expand any farther than Sioux Falls until additional data on how it is working can be gathered. Dr Engelbrecht presented information at the November Council meeting indicating that the Medicaid Board was following the Council's recommendations and further implementation throughout the state was being delayed until data was analyzed and presented to the Council.

3. Governor Bill Janklow's provider tax

Probably no issue has challenged our leadership more than this year's provider tax introduced by Governor Bill Janklow. Governor Janklow earlier had requested support from the Medical Association for a healthcare sales tax. As his plan percolated through the session it changed into a provider tax and received a great deal of support from the state legislators. It looked like it was something that would pass. Individual's and the Medical Association's opposition to this tax brought the Governor and the Council to a meeting via video conferencing to Aberdeen, Mitchell, Sioux Falls, Watertown and Yankton sites. In the end, the provider tax bill failed to pass.

4. The medical student project

Coming from a recommendation of the Executive Commission, the Council directed that members interested in sponsoring a medical student could pay the state and AMA dues for that medical student. In addition, that member should generally act as a mentor to the student in hopes of promoting the early development of student appreciation for the importance of organized medicine on the state and national level. In November, the Council directed the executive office to distribute to interested members the names of students. This program has been successful with all first year medical students having a physician sponsor.

Other issues addressed by the Council through the year were as follows:

1. Worker's Compensation

Dr Carlson monitored this activity for the Council. Early in the year the Council recommended pushing for an 85% fee schedule. In November the Council learned the Department of Labor decided the fee schedule would be 85% for the first year, 80% the second year and "open" thereafter.

2. Annual Meeting

In September it was recommended that efforts be made to identify physicians attending their first annual meeting. In November the Council recommended a blanket registration fee to encourage attendance at the annual banquet.

3. Managed Care

The AMA negotiation seminar was held on January 27 for physicians and clinic administrators. The Council recommended that legislation be developed to define managed care plans being offered in this state, such that every plan would be required to file, be approved and meet certain standards.

4. Pharmacy Issues

The Council voted to oppose drug legislation which would eliminate discriminatory pricing of drugs by manufacturers. In addition, the Council expressed displeasure with pharmaceutical companies reimbursing pharmacists or counseling patients to ask their doctor to switch to a "preferred product". The Council also directed administrators to develop legislation to allow physicians the freedom to monitor the names of potential drug abusers in emergency rooms. This legislation failed.

5. Definition of Surgery

The Council directed legislative action which would define surgery to include laser and ionizing radiation for intended palliation, relief, cure or diagnosis; This action was successful.

6. Licensure Requirements for Telemedicine

The Council directed legislative action that would waive licensure for physicians who provide an occasional consultation but would require South Dakota licensure for physicians who consult on a continuing basis. This was especially for the telemed scenario, and did pass.

7. Independent Practice for Nurse Practitioners

The Council opposed legislation that would allow independent practice of nurse practitioners without physician supervisors. Our representatives in Pierre took this directive, interacted with the Board of Nursing resulting in legislation that did not allow independent practice.

8. Potential Drug Abuse Action

Following the request of the South Dakota Hospital Association, the Council proposed that physicians as well as nurses and pharmacists with potential alcohol and drug abuse problems first be referred to the HELP Committee prior to being referred to the Board of Medical Examiners.

9. Physician Television Production

The Council supported the production of a series of half hour TV public education videos to be shown on South Dakota Public TV this fall during prime time. The videos would highlight South Dakota physicians and their opinions on various health care topics. The Council directed that requests for funding for these programs start at the district level and later the possibility for matching funds from the state level would be considered.

10. Minnesota Tax on South Dakota Physicians

The Council was pleased to hear that the South Dakota,

North Dakota, Iowa and Wisconsin Medical Association law suit (ongoing since last year) was successful. The court ruled that Minnesota could not tax physicians practicing outside of Minnesota when they care for Minnesota residents.

11. Chaperone Required by Law

A bill that would require a chaperone in the room during a pelvic exam (unless waived by the patient) passed the legislature but was then vetoed by the Governor.

12. Council appreciation for legislative lobbyist efforts

After the dust settled the Council realized the difficult matter of balancing the concerns of physicians and having our best interests served in the legislative process is an extremely difficult one. Our legislative efforts this year overall were very successful. The Council voted unanimously to express our appreciation to our lobbyists and administrative people for their efforts in interacting with state government.

The Council seated the following SoDaPAC board members:

Marie Hovland - District 1; M. Venugopal, MD - District 3; Lucio Margallo, MD - District 6; Thomas White, MD, John

Sall, MD - District 7; Scott Eccarius, MD, John Barlow, MD, Richard Porter, MD, Robbin Ahrlin, Marlys Porter - District 9; Kevin Bjordahl, MD - District 12.

The Council elected the following to Honorary Life Membership in the State Association: Raymond Cornford, MD, Verlynne Volin, MD, Sandro Visani, MD, T. J. Wrage, Jr., MD, James Ryan, MD, E. W. Sanderson, MD and Dale Bergeron, MD.

Dr. Engelbrecht was nominated as the South Dakota candidate for the HCFA Practicing Physician Advisory Council.

The C.B. Alford Award for Public Health was presented by the State Health Department to Dr. Ruggle Stahn and Dr. Christopher Krogh.

Dr. Rod Parry was nominated by the Council for a Residency Review Committee of the AMA.

Respectfully submitted,

Richard P. Holm, MD

Council Chairman

The Reference Committee reviewed the report of the Chairman of the Council and recommended it be accepted as submitted.



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REPORT OF THE AMA DELEGATE

As your Alternate Delegate to the AMA last year, I attended the AMA annual meeting in June in Chicago and the interim meeting this past December in Honolulu. The American Medical Association and its federation of state medical societies and associations continues to act in the best interests and for the general welfare and benefit of all physicians and their patients, regardless of their specialty. The AMA is the one umbrella organization representing the whole of medicine as recognized by both the politicians and the citizens of this country.

Many feel that health care reform has been placed on the back burner politically in this country because of the political changes that have occurred within our country over the past year, but I can tell you that reform of our health care system continues very aggressively throughout this country of ours, spurred mainly by corporate and insurance interests. These corporate entities continue to become larger and richer with billions of dollars in venture capital available to them so that they can pursue their own self interests. Much of the annual meeting this past year and the interim meeting was spent formulating ways in which physicians can continue to control the practice of medicine and their own access to the practice of medicine, as well as guaranteeing the right of their patients to access the health care system and to choose their physician. Continued support on the part of every physician in this country toward those endeavors is critical.

I have been involved in the Council, the Executive Commission and the annual meeting over the past year. Also, I have been involved in the affairs of the State Medical Association as requested by your president over the past year.

I look forward to continuing to serve you in the position of the AMA Delegate. Please feel free to contact me at any time concerning your views with regard to organized medicine, both locally and on the national level, so that I can better represent you in the North Central Medical Conference and the American Medical Association.

Respectfully submitted,

Michael W. Pekas, MD
AMA Delegate

The Reference Committee reviewed the report of the AMA Delegate and recommended it be accepted as submitted.

REPORT OF THE SPEAKER OF THE HOUSE

The experience at last year's House of Delegates meeting would attest to the fact that this body will be addressing increasingly important and controversial issues. The House serves as the ultimate policy-making body of the Association and offers an ideal opportunity for a great many physicians to become involved and be heard.

Pertinent legislative items such as "provider taxes" demands that our State Association be informed and united in our positions. I welcome the participation of the membership in serving as delegates, alternate delegates and members of Reference Committees. Thank you for your efforts in addressing the important issues that will come before the House. I appreciate the opportunity to serve as your Speaker. I look forward to the introduction of resolutions and the Reference Committee meetings.

Respectfully submitted,
Stephan D. Schroeder, MD

Speaker of the House

The Reference Committee reviewed the report of the Speaker of the House and recommended it be accepted as submitted.

REPORT OF COUNCILOR AT LARGE

A whole year has passed since I placed the presidential medallion around Dr Reynolds' neck and we entrusted the presidency in his capable hands. I have been able to join the distinguished ranks of past presidents (green geezers) but have not yet faded away.

I have continued as the physician representative on the State Health Reform Council and will become SDSMA Alternate Delegate to the AMA at the June AMA meeting. I look forward to being part of the AMA at a time when organized medicine may undergo significant change.* I also look forward to continuing to serve SDSMA in the coming years. My goal is to fairly represent the physicians of South Dakota and I can only do that effectively through the organization of SDSMA. I ask you all to get involved at both district and state levels. We need your input!

Bob Ferrell has retired as AMA Delegate after many years of dedicated service to SDSMA. Please join me in expressing our appreciation for his years of effort and sacrifice for our association. Please join me also in congratulating our first woman president, and also our youngest president: Congratulations, Mary!

Respectfully submitted,

Thomas Krafka, MD
Councilor at Large

*See Reorganizing Organized Medicine. South Dakota Journal of Medicine, May 1995.

The Reference Committee reviewed the report of the Councilor at Large and recommended it be accepted as submitted.

REPORT OF THE CHIEF EXECUTIVE OFFICER

1994/1995 will be a very memorable year in the history books for medicine in the United States. The year began with health care reform on the front burner of the political agenda at a national level, and ended the year with the major forces of health care reform coming at the state level and driven by the private sector.

The challenges created in this changing environment are many, not the least of which will be presenting a unified voice for physicians. In this new era physicians have become, and necessarily so, more competitive. This competition has strained the traditional congenial and fraternal ties that once bound physicians.

In these times of PHOs, networks, IPAs, joint ventures, risk taking and the like, it is more important than ever before to remember the things physicians have in common, and to use those common bonds as the basis for unity within this very proud profession. Do not allow the profession to be torn apart by outside pressure. Both physicians and their patients have far too much at stake to allow this to occur. It should be painfully clear that only through unity can medicine's voice be clearly heard and respected.

Your elected leaders deserve a hearty thanks. Your councilors, officers and commission members have wrestled with many challenging issues this past year and their volunteer efforts on behalf of the profession and your patients should not go unnoticed.

I would like to take this opportunity to thank the district medical societies and their officers for the kindness and courtesies extended to Dr Reynolds and me during our visits. It is truly appreciated.

As has been previously stated, this year presented many challenges to the South Dakota State Medical Association and, for his wisdom, courage and compassion in guiding us through these times, I would like to express my deepest appreciation to Dr James Reynolds and his lovely wife, Debby. The friendship that Jim, Debby and I have enjoyed extends almost five decades. Words cannot adequately express what a privilege it has been for me to work with someone of Jim's integrity and ability. He truly represented all of medicine in an exemplary fashion.

Respectfully submitted,

Robert D. Johnson

Chief Executive Officer

The Reference Committee reviewed the report of the Chief Executive Officer and recommended it be accepted as submitted.

REPORT OF FIRST DISTRICT COUNCILOR

Except for the usual summer recess and January, District One meetings were held the first Wednesday evening of each month. Each meeting consisted of dinner with the Alliance, a business meeting and scientific presentation. Many guest speakers were generously sponsored by our friends in the pharmaceutical industry.

At the first meeting of the season, September, Dr Jim Powell, pharmacist, sponsored by Pfizer, discussed drug delivery systems.

In October Steve Gutnik, MD, sponsored by Merck & Co, Inc, discussed gastroenterology problems.

November was business only.

Our annual December Christmas get-together was graciously hosted by Carole and Mark Harlow.

State president, Jim Reynolds, and CEO, Bob Johnson, were guests in February and participated in a spirited discussion of legislative issues. The following officers were elected: President - Winston Odland, MD; Vice-president - John Vidoloff, MD; Secretary-Treasurer - Paul Eckrich, MD.

Local physicians Tom Luzier and Richard Backes appeared in March and April.

New members include: Tage Born, MD, Donna Small, MD; Steve Redmond, MD.

As always, our partners in the alliance maintained an active presence under President Mary Vidoloff. AMA-ERF co-chairmen, Carmen Chavier and Marie Hovland, collected a total of \$4120 for the USD School of Medicine.

Respectfully submitted

James I. Hovland, MD

First District Councilor

The Reference Committee reviewed the report of the First District Councilor and recommended it be accepted as submitted.

REPORT OF THE SECOND DISTRICT COUNCILORS

The Watertown District Medical Society does not meet during the months of June, July and August. Our first meet-

ing of this report was in September. A social meeting was held at the Watertown Country Club and there were no guests, just a social meeting where spouses are invited.

OCTOBER - Our October meeting was held on October 4. The Council report was given by Dr Gehring and a printed report was distributed to all the members. It was announced that Dr Jim Reynolds, the state president, would be visiting in February of 1995. It was also noted that legislators would be invited for the December meeting because our District would meet on November 1 and the election would be on November 8.

It was also noted that a Proclamation was given to this district by Governor Walter Dale Miller for our efforts in the Prime Project. Our guests were Gary Hoffer, Mike Vogely and Donna Keeler, who presented and discussed the prime project as it relates to the Watertown District.

NOVEMBER - The November meeting of the Watertown District was held on November 1. Dr Peterson introduced students who were present from the Medical School; Mike Stevens was with Dr Linda Peterson and Carwin Wallace was with the Brown Clinic.

Dr Lowell Smith volunteered to be the Doctor of the Day and along with two others from our district. A letter from the State Medical Association asking for nominations for the Distinguished Service Award and the Community Service Award was read by Dr Ken Peterson. He named the nominating committee: Dr Gary Timmerman, Chairman; Dr Robert Crank and Dr Ramona Peshek. They were to receive a letter from the secretary for the announcement of those that would be nominated.

DECEMBER - The December 6 meeting of the Watertown District Medical Society was also the election meeting. The nominating committee had recommended the following slate of officers: President, Dr Steven Feeney; President Elect, Dr James Jones; Secretary/Treasurer, Dr Gerald Tracy, with back up from Dr Ramona Peshek; three year delegate to the SD Medical Association, Dr Aaron Shives, his alternate, Dr James Jones; two year delegate, Dr Steve Feeney, his alternate, Dr Ramona Peshek; one year delegate, Dr Roger Carter and his alternate, Dr Gary Timmerman. The slate of officers was elected as listed above.

There was communication from the hospital in reference to help with reimbursement for travel and recruiting physicians. Motion was made that the district give the hospital up to \$1000 if requested. Motion was seconded and carried.

A total of eight legislators attended the meeting, including Doug Bierschbach, Torchy Ries, Pat Eidsness, Don Broz, Randy Frederick, Harold Halverson, David Gleason and Roger Lee. There were two or three others who had conflicting meetings and were unable to attend.

A list of the bills that had been proposed to be submitted by the State Health Department was distributed to the legislators and the members of the district as well as possible legislation to be proposed by the State Medical Association. There was a lot of good discussion. The most important message was that the Watertown District Medical Society members wish to be able to call and discuss bills of medical importance with our legislators from the area. They also felt that this was important and the meeting was left with this good thought that they were available for conversation on medical issues with the members of our district.

JANUARY - The January meeting was held and the program was presented by Dr Sherman from the Human Services Agency. He gave an update on ATCO Enterprises and the Human Services Agency changes that have taken place recently and the reason for these changes. He assured the physicians that he would be cooperative in any way in helping them to provide the care that is available through Human Services Agency for the physicians patients. He also passed out a pamphlet on HSA and the Alcohol and Drug Referral Treatment Program.

FEBRUARY - The February meeting was held with Dr Jim Reynolds, who presented the State of the State for the State Medical Association. Bob Johnson was present and gave updates on DakotaCare and other state issues.

MARCH - The March meeting was held March 7. Dr Jones introduced Dean Krogman from the SD State Medical Association and he gave an update on the recent legislative session. The program was informative and well received.

APRIL - The April meeting was held April 7 and there was a Councilors Report by Dr Gehring who also had a printed report for all the members which was distributed. There was a great deal of discussion about DakotaCare and the upcoming state meeting. Dr Likness also reminded the District that on Sunday, April 9, there would be a retirement party for Dr T. J. Wrage. A motion was made, seconded and passed that a resolution in reference to the State Medical Association recognizing Dr Wrage on the occasion of his retirement. We also had some recognition plans for him from the District Medical Society.

Respectfully submitted

James C. Larson, MD
Stephen H. Gehring, MD
Second District Councilors

The Reference Committee reviewed the report of the Second District Councilors and recommended it be accepted as submitted.

REPORT OF THE THIRD DISTRICT COUNCILORS

The Third District continued its regular meetings during 1994. The officers for the Third District included Secretary/Treasurer, Dr Gerald Turner, Vice President, Dr Daniel Cecil; and President, Dr Adel Hassan. The councilors for this district included Dr Richard Holm and Dr Richard Wake.

In February the meeting was held at Nicky's Supper Club in Madison. A presentation was made by Dr Ed Anderson on post operative pain management.

In April there was a social gathering at the Ram Pub in Brookings. Dr Holm presented a preview of a video produced for public television.

In June we met at the Elks Club in Brookings. There was a discussion by Drs Rietz, Holm and Jacobs regarding the health care proposals by McKennan and Sioux Valley Hospitals and the medical council's position on providers and hospital insurance plans.

In September 1994, the meeting was held at Dr Merritt Warren's cabin on Lake Poinsett. There was a discussion regarding doctors wishing to serve as Doctor of the Day at the 1995 legislative session as well as discussion on health care reform.

The final meeting for the year, in December, was held in Flandreau at the Steak House and there was a discussion by

AUGUST 1995

Dr Jim Reynolds on health care issues in the state of South Dakota.

Respectfully submitted,

Richard A. Wake, MD
Richard P. Holm, MD
Third District Councilors

The Reference Committee reviewed the report of the Third District Councilors and recommended it be accepted as submitted.

REPORT OF THE FOURTH DISTRICT COUNCILORS

The Fourth District Medical Society held its annual meeting on January 11, 1995.

Officers elected included: Dr Noel Chicoine, President; Dr Bernard Linn, Vice President; Dr Eldon Becker, Secretary. The delegates to the state convention are Dr Ken Bartholomew and Dr B. O. Lindbloom; alternates are Dr Eldon Becker and Dr Bernard Linn. Dr Phillip Hoffsten was nominated for a three year term as councilor and Dr Tom Huber continues in the second year of his three year term as councilor.

A very busy Continuing Medical Education agenda was sponsored by St. Mary's Hospital Continuing Medical Education Department. A list of the presentations are as below:

CME PROGRAMS - 1994

January 18	Acid Peptic Disease Update Martin Freeman, MD
February 15	New Aspects on Treatment of Rheumatoid Arthritis P. James Eckhoff, Jr, MD
March 8	Contemporary Status of Thyroid Functions Tests D. W. Ohrt, MD
March 15	Women and Heart Disease Wayne L. Peters, MD
March 15	Blood-Born Pathogens: Con- siderations for the Hospital Environment R. L. Nichols, MD
April 28	Update on Osteo and Rheumatoid Arthritis J. A. Engelbrecht, MD
May 3	Evaluation and Management of Patients with Syncope P. L. Olson, MD
May 5	Staged Diabetes Management: An Overview M. A. Kummer, MD
June 7	Attention Deficit Hyperactivity Disorder W. M. Deering, MD
June 21	Current Thinking Regarding Prostatic Hypertrophy & Blad- der Neck Obstruction R. P. Millea, MD
September 20	Depression and Its Treatment: Focusing on New Somatic Therapies A. M. Vaca, MD
September 21	Diagnosis & Treatment of In- somnia by Pharmacological and Non-Pharmacological Methods

November 15

K. A. Kelts, MD
Cutaneous Manifestations of HIV

December 13

R. J. Knutson, MD
Diabetic Foot Care
D. R. Lonbaken, DPM

Membership in the Fourth District Medical Society has increased by three members in the last year. Dr Cindy Pochop, Internist, joined Dakota Plains Clinic in the summer of 1994; Dr Michael Richardson, a Family Practitioner, joined Medical Associates Clinic in the summer of 1994; and Dr Paul Larson opened his practice of urology here in Pierre in February 1995.

There are now 22 active physicians on the St. Mary's Hospital staff.

Respectfully submitted,

P. E. Hoffsten, MD,
Thomas Huber, MD
Fourth District Councilors

The Reference Committee reviewed the report of the Fourth District Councilors and recommended it be accepted as submitted.

REPORT OF FIFTH DISTRICT COUNCILORS

The Fifth District Medical Society meetings were held in Huron throughout 1994 and 1995.

The July 12, 1994 meeting was held and well attended by both members of the district and the alliance. A rather prolonged and hearty discussion of the 1994 annual meeting was held with Steve Schroeder as the moderator. During this discussion further information was provided the district concerning the Dakota Health Plan Willing Provider legislation, concerns expressed at the meeting of Dakota Health Plan

and Presentation Health System and also the prime network. The entire district entered into the discussion and felt that support for the House of Delegates was appropriate.

The fall meeting of the district, unfortunately, was cancelled because of the unavailability of the speaker. The meeting was then held December 20, 1994, which was also the annual visit of the president of the State Medical Association, Dr James Reynolds and CEO, Bob Johnson. This meeting was well attended and excellent. The report of the national AMA meeting and several aspects of health care were discussed by Dr Reynolds. Mr Johnson discussed what he was told regarding Governor Janklow's plans for the government employee health program and brought us up to date on this aspect of the legislative proposals at that point.

A district meeting was also held March 14, 1995. This was attended by Dr Schroeder and members from DeSmet as well as the local Huron members. Considerable discussion was held concerning where we are going and what the legislature had and had not done during the current session.

There are plans for a May meeting prior to the State Medical Association meeting at which time we anticipate any possible resolutions or suggestions from the Fifth District concerning matters to be brought before the House of Delegates.

The officers for the ensuing year were elected at the last meeting with Dr Hiroo Kapur elected as President; Dr Nathan Loewen, Vice President; and Dr Louis Karlen, Secretary-Treasurer.

Respectfully submitted,

H. L. Saylor, Jr, MD
Fifth District Councilor

The Reference Committee reviewed the report of the Fifth District Councilor and recommended it be accepted as submitted.

South Dakota Society Of Pathologists



REPORT OF THE SIXTH DISTRICT COUNCILORS

The Sixth District Medical Society met several times during the past year. Speakers and topics included:

1. "Recurrent Depression and Therapeutics for Depression", Dr Paul Frazer.
2. "GI Motility Disorders", Dr Joseph Murray, Iowa.
3. "Diabetes Mellitus, Type II", Dr Angelina Trujillo.
4. "Benign Prostatic Hypertrophy", Dr Dileep Bhat.
5. "Systolic Hypertension in the Elderly.
6. Jim Beddow, gubernatorial candidate, spoke on healthcare.
7. Bill Janklow, gubernatorial candidate, spoke on healthcare and the structure of South Dakota government.
8. "Asthma and Hypersensitivity", Dr Mark Bubak.
9. The year finished with the President's meeting, with Dr Jim Reynolds present.

District officers for 1995 include Jerome Howe, MD, President; Douglas Holum, MD, Vice President; and Carey Buhler, MD, Secretary/Treasurer.

Respectfully submitted,
W. P. Baas, MD
Lucio Margallo, MD
Sixth District Councilors

The Reference Committee reviewed the report of the Sixth District Councilors and recommended it be accepted as submitted.

REPORT OF THE SEVENTH DISTRICT COUNCILORS

The Seventh District Medical Society meets the first Tuesday of each month starting at 6:30 p.m., from September through May at the Westward Ho Country Club in Sioux Falls, South Dakota. All members of the South Dakota Medical Association are welcome at the meeting as guests.

The current officers from the Seventh District are: Karla Murphy, MD, President; Angelina L. Trujillo, MD, Vice President; Khristine Lindo, MD, Secretary; and J. Michael McMillin, MD, Treasurer. As with other district medical societies, multiple meetings center around current health care proposals. These will not all be specifically listed.

In September, Jerry Walton, MD, the chair of "Sioux Falls Tomorrow", reviewed the history of "Sioux Falls Tomorrow" and presented an overview of the directions proposed for the future development of Sioux Falls which was very interesting.

In October, Walter Carlson, MD presented an evening program on the proposed "Any Willing Provider Laws". Also at this meeting we voted to approve \$1,000 toward the support of the "Health Care Reform and You" seminar being sponsored by Dr. Sanchez.

In November, we had the privilege of having both gubernatorial candidates present to speak and to answer questions.

In December a meeting was held with the legislators and their spouses and Dean Krogman introduced the legislators to the Seventh District members.

In January, Jim Reynolds, MD, President of the South Dakota State Medical Association, was our guest.

In February, Pete Galindo from Blue Shield presented information on the status of Blue Shield and the history of the separation from South Dakota Blue Cross.

In March, Rick Holm, MD was our guest and gave a presentation to our district on his effort in making educational films for Public TV. Following this presentation, our district voted to support his program with a \$6,500 donation.

In April, the program will be a discussion on political action committees and all of the residents will be invited to try to get them involved in this process earlier in their career.

Respectfully submitted,

Guy E. Tam, MD
K. Gene Koob, MD
Jeffrey B. Hagen, MD
Walter Carlson, MD
Lowell Hyland, MD
C. Roger Stoltz, MD
Robert Raskowski, MD
Daniel Kennelly, MD
Loren Tschetter, MD
Seventh District Councilors

The Reference Committee reviewed the report of the Seventh District Councilors and recommended it be accepted as submitted.

REPORT OF THE EIGHTH DISTRICT COUNCILOR

The Eighth District Medical Society of the South Dakota State Medical Association met twice during the year 1994-95. Customary business was conducted and several new members were accepted into District Eight during the year. New members include: John E. Cook, Dakota Dunes; David W. Gauger, Yankton; Paula Hicks, Yankton; Phillip Lowe, Yankton; Myles Tieszen, Yankton; and Curtiss Farrell, Dakota Dunes.

Dr Gordon Held was unanimously elected to the position of honorary life membership in District Eight. District Eight nominees for state wide awards include: C. B. Alford Public Health Award, Dr Brooks Ranney; Distinguished Service Award, Dr Ted Sattler; Community Service Award, Dr Robert F. Thompson; Medical Media Award, Jolene Buehner.

Delegates from District Eight for the 1995 state meeting are: Dr Lars Aanning, Dr Julie Stevens, Dr Robert F. Thompson and Dr Frank Messner. Alternate delegates include: Dr Jem Hof, Dr Herb Saloum and Dr Jay Hubner. District Eight's nominee to serve on the Nominating Committee is Dr Jay Hubner.

Due to a mid-year move, Dr Larry Meyer's (now residing in Rapid City) councilor position will be filled by Dr Jay Hubner. Dr Bruce Mannes accepted renomination as the second councilor from District Eight. Dr Herb Saloum accepted nomination as alternate councilor for a three year term. District Eight officers for the year 1995-96 will be elected at the summer meeting.

Dr James Reynolds, president of the South Dakota Medical Association, addressed District Eight during their spring meeting. Topics included the spectrum from medical provider taxes to managed care in South Dakota.

Respectfully submitted,
Bruce Mannes, MD
Eighth District Councilor

The Reference Committee reviewed the report of the Eighth District Councilor and recommended it be accepted as submitted.

REPORT OF THE NINTH DISTRICT COUNCILORS

The Black Hills Medical Society and Medical Alliance began the year designated for Health Care Reform and fondly remembered years past as they enjoyed "Camelot" at the Black Hills Playhouse. Our Fall Season began with a presentation from our state lobbyist, Dean Krogman, on key legislative issues and our Medical Association's position. Meeting with our local legislators at our October "Cracker-Barrel" did little to inform us of the major issues to come.

In November we turned to educational efforts and reviewed the Agency for Health Care Policy Research recommendations on the treatment of Benign Prostate Hypertrophy. The largest crowd ever attended our annual Christmas party held in conjunction with Rapid City Regional Hospital.

The New Year brought us the sobering realities of the "Balkans" and Dr Terry Alstiel's exemplary efforts. The "House Calls" program was approved for our financial support. Dr James Reynolds and Bob Johnson provided an update of legislative activities and reminded us of the continuous need to participate at all levels in this process. Anticipation of Spring was reinforced by Dr Dan Tackett's "Black and White" landscapes amidst the reminders of our cultural heritage. A repeat opportunity to review legislative issues and to discuss our views at the April "Cracker-Barrel" kept us in the legislative process. We ended our year learning more about a community resource and the military health system by visiting Ellsworth Air Force Base.

The Medical Alliance continues to be quite active and instrumental to our success.

We were pleased to accept 30 new members this year. At the same time, we regret the passing of Robert Branch, MD; Bernard Clark, MD; M. P. Merryman, MD; Edward Ruud, MD.

Respectfully submitted,
Charles E. Hart, MD
Ninth District Councilor

The Reference Committee reviewed the report of the Ninth District Councilor and recommended it be accepted as submitted.

REPORT OF THE TENTH DISTRICT COUNCILORS

The Tenth District held its annual meeting on January 10, 1995, in Winner, South Dakota. Mr Bob Johnson and Dr Jim Reynolds attended the meeting from the State Medical Association. Routine business was conducted including the election of officers for the upcoming year. Elected President was Dr E. P. Sweet, Vice President was Dr Tony Berg and Secretary was Dr Mary Carpenter. The present council members, Dr Kafka and Dr Tobin, will continue in that function. The delegate elected was Dr R. G. Nemer with the alternate delegate elected being Dr Stiehl.

Following the supper meeting, Mr Johnson and Dr Reynolds provided a discussion on the up coming legislative session and the issues and expectations of the State Medical Association. Various other issues were discussed including the expanding Medicaid program and the district members were advised on what to expect as this involves our area.

Respectfully submitted,

Gregg M. Tobin, MD
Tenth District Councilor

The Reference Committee reviewed the report of the Tenth District Councilor and recommended it be accepted as submitted.

REPORT OF THE ELEVENTH DISTRICT COUNCILORS

In 1995, we had a visit from our president, Jim Reynolds, and Bob Johnson who enlightened us on upcoming legislation for the ensuing year.

During the past year we lost two physicians from District 11 through relocation. We now have five physicians in District 11. We have four doctors in Mobridge, South Dakota: one internist, one radiologist, and two family physicians. We have one doctor in Selby, South Dakota. Currently we are recruiting for a general surgeon.

Our district held election and the officers for 1995 are as follows: President, Ben Henderson, DO, Vice President, James Collins, MD, and Secretary, Leonard Linde, MD.

Respectfully submitted,
James D. Collins, MD
Eleventh District Councilor

The Reference Committee reviewed the report of the Eleventh District Councilor and recommended it be accepted as submitted.

REPORT OF THE TWELFTH DISTRICT COUNCILOR

The Whetstone Valley District Medical Society had three meetings in the 1994-1995 year. The fall meeting was held in Milbank, where officers were elected. It was decided that the offices would remain as they were for the preceding year. These are as follows:

President:	Alan Bloom, MD, Webster
Vice President:	Lawrence Nelson, MD, Webster
Secretary:	Kevin L. Bjordahl, MD, Webster
Councilor:	Kevin L. Bjordahl, MD, Webster
Second Councilor:	Alan Bloom, MD, Webster

The second meeting was held at the home of Dr Joseph Kass in Rosholt in September. That meeting was attended by the SDSMA President and the CEO, to update district members on current activities within the Association. The third meeting of the year was held in Webster on April 19, 1995. The primary speaker was an MD/JD, who spoke on medical/legal issues.

Respectfully submitted,
K. L. Bjordahl, MD
Twelfth District Councilor

The Reference Committee reviewed the report of the Twelfth District Councilor and recommended it be accepted as submitted.



Susan Tjarks, President, South Dakota
State Medical Association Alliance

Diversity Rules

I recently attended a family reunion in the beautiful mountain village of Cuchara, Colorado. Our family get-togethers are a lot like a meeting of the United Nations-diversity rules. This family reunion not only was hosted by my father, his Japanese wife, and their five-year-old son, but my mother and her husband also attended. Add to this my vegetarian, animal rightist, EXTREMELY LIBERAL brother from Oregon, my CPA, father of four, EXTREMELY CONSERVATIVE brother from Las Vegas, my recently divorced sister and her new "friend", and finally, the Dr Tjarks family from Mitchell and you've got the picture. Quite a group.

As I looked around at that gathering, it was hard to believe that there could be such disparate people all from one family. But being family is the one commonality that binds us together. Our diversity serves to enrich that bond.

That common link, enriched by diversity, is reminiscent of the experience I had at the AMA Alliance Convention in June. I am still impressed by the sight of 567 delegates and guests from across this nation sitting together in one room working toward a common goal. We were all there because we value the work of our physician spouses and want to do all that we can to promote a safe and healthy life style for all Americans.

Now that is not to say that we all agree on every issue. Quite the contrary. The challenges that face alliance members from Massachusetts and Georgia are foreign to those of us from South Dakota. And the geographic problems that are unique to a state like ours can scarcely be comprehended by the Rhode Island and West Virginia delegations. Still, we are and ever will be "physician spouses dedicated to the health of America". And that is the tie that binds.

On the plane to Chicago, I sat next to a young pediatrician from Philadelphia. In the course of our conversation, he complained that he felt that the AMA was a "specialty-oriented group" that didn't represent the issues surrounding primary care. I listened with great interest to his concerns, because, of course, my husband is in primary care. What I heard him saying was that there were times when he personally had benefited a great deal from the AMA, while at other times he didn't feel that they completely represented his views. My response to his comment was that the AMA, as well as the Alliance, serve as umbrella organizations which assist physicians and their spouses in their common goal of providing quality health care to patients while doing their best to protect the interests of all physicians. As members of such an organization, we are responsible for communicating our beliefs and views to those in policy making positions. We must be involved. We also have to realize that in a field as broad as medicine there are many perspectives and opinions. Likewise there are many universal, undisputed goals. It is imperative for us to have an instrument that enables us to speak with a united voice on those concerns and issues that affect us all. While it is true that our diversity is great, the common goals we share are much greater.

Like a family united by a common past, physicians and spouses also need to stand together united in vision and purpose. Please continue to support the AMA and Alliance. Your membership and involvement can make a difference!

Susan Tjarks

REPORT OF THE COMMISSION ON LEGISLATION AND GOVERNMENTAL RELATIONS

First meeting Friday, September 16, 1994

Present: Drs John Barlow, John Sall, James Wiggs, Thomas Olson, J. Michael McMillin, Rodney Viscarra; Chuck Rose, Clinic Manager Representative; Ruth Parry, Alliance Representative; and staff Robert Johnson, Dean Krogman, Jan Anderson.

The following were discussed:

1. Endorsement of a proposed amendment to the podiatry practice act.
2. There was discussion about practicing medicine via telecommunications.
3. There was discussion of tort reform. A motion was made that the commission recommend that the SDSMA support legislation placing a \$350,000 cap on awards for non-economic damages.
4. There was a discussion about any willing provider or point of service option legislation and the commission moved as directed by the House of Delegates to sponsor such legislation.
5. The commission moved to oppose legislation on the practice of direct entry midwifery.
6. The commission moved to endorse legislation amending the Medical Practice Act to eliminate the U.S. citizenship requirement.
7. The commission recommended that the SDSMA endorse legislation to amend the Physical Therapy Practice Act to state that the fee for licensure by examination not exceed \$300.
8. The commission discussed correspondence from the South Dakota Nurses Association encouraging nurse practitioners to obtain a Medicare Provider number.
9. The commission recommended that the SDSMA prepare permissive legislation providing protection for physicians who maintain lists of patients who are seeking analgesic medications inappropriately.
10. The commission discussed a letter from Dr Stephen Haas requesting legislation that clearly fixes the liability for those decisions made by insurance companies or other third party payers when they refuse to cover hospitalization days for services despite the physicians recommendation. The commission took the advice of attorney Dave Gerdes and felt that it is important for physicians to maintain responsibility for their patients and the documentation of the medical records is adequate protection and no legislation is needed at this time.
11. There was a discussion on reimbursement of worker's compensation claims.
12. The commission heard a review of several medically related topics which may be introduced in the 1995 legislature from Dean Krogman. Mr Krogman also reported on several national legislative issues.
13. Mr Johnson reported that the court ruled in our favor on the Minnesota tax on out of state physicians finding this tax unconstitutional.
14. The commission discussed the definition of surgery.
15. The commission moved to oppose legislation to prohibit discriminatory pricing of drugs by manufacturers and sellers.

16. Dr Barlow briefly discussed a fax sent to the commission talking about present arrangements for managed care and geriatrics.
17. The commission discussed the Medicaid pilot program that started in Watertown.

The meeting was adjourned at 3:45 pm.

Second Meeting Wednesday, November 9, 1994, By Conference Call

Present: Drs John Barlow, Chairman; Gary Burning, Mark Perpich, Laura Larsen, O. Myron Jerde, J. Michael McMillin, Catherine Gerrish, John Sall, James Wiggs, Stephen Feeney; Clinic Manager Chuck Rose; staff Bob Johnson, Dean Krogman and Jan Anderson.

The commission discussed the following:

1. Discussion of draft legislation by Mr Gerdes protecting physicians who provide information to law enforcement. A motion was made that Mr Gerdes be contacted to see if he could prepare legislation which would address patients with this drug seeking behavior and present this to the council for their consideration.
2. The commission discussed the definition of surgery. The commission moved to recommend that the SDSMA introduce legislation as proposed.
3. The commission moved to recommend that the SDSMA endorse proposed amendments by the South Dakota Lions Eye Bank to endorse their proposed amendments to the Uniform Anatomical Gift Act.
4. The responsibility of emergency medical services to honor "do not resuscitate" orders was discussed. The commission felt that inasmuch as this involves facilities, the SDSMA should not take action at this time.
5. The commission recommended that the SDSMA endorse legislation to require certification for utilization review agents in this state.
6. Mr Johnson reported that the Medicaid pilot project was temporarily on hold.
7. The commission discussed any willing provider legislation and the commission moved to recommend that the SDSMA ask Dave Gerdes to redraft legislation which will allow patients to select their physician on a non-punitive point of service basis and that such be incorporated into the Patient Protection Act and sponsored by the SDSMA in the upcoming legislative session.
8. Dr Reynolds submitted a letter he had received from the State Planned Parenthood Association.
9. The commission recommended that the Council sponsor an amendment which would remove the requirement for a second opinion on prescribing psychotropic drugs.
10. The commission discussed telemedicine. A motion was made to recommend that the SDSMA, with legal counsel's approval, prepare legislation which will waive the necessity for a medical license for those physicians providing medical consultations on an occasional basis but will require those physicians with contracts to provide consultations on a continuing basis to have a South Dakota license to practice medicine.

The meeting was adjourned at 3:00 pm.

Respectfully submitted,

John F. Barlow, MD, Chairman

Commission on Legislation and Governmental Relations

The Reference Committee reviewed the report of the Commission on Legislation and Governmental Relations and recommended it be accepted as submitted.

REPORT OF THE COMMISSION ON MEDICAL SERVICES

The Commission on Medical Services held one meeting on October 21, 1994. Eight physician members along with guests Dr Gary Timmerman and two registered nurses, Bea Johnson and Robin Aarstad attended. Dean Krogman and Donna Sievers represented the SDSMA staff.

Dr Timmerman presented information about the role of Registered Nurse First Assistants (RNFA). Dr Timmerman wanted to present the benefits of RNFAs to physicians and hospitals and asked for SDSMA support concerning possible legislation. The RNFA would be able to assist a surgeon in pre-op, post-op and during basic surgery (always under direct supervision of the surgeon). He/she would undergo a uniform training program and then be board certified after appropriate testing. The commission deferred this matter and asked for further input first from the SD Board of Nursing and from other state boards that license RNFAs. It was also felt to be important to obtain input from rural surgeons in South Dakota to see if they saw a need for this additional specialization of RNs.

Several informational items were presented by Dean Krogman. He stated the Department of Labor will introduce rules to reimburse physicians at 85% starting the first year, 80% the year after and then each year will be negotiated. Chiropractors and physical therapists will be able to continue to bill 100%. He also presented a letter from Jacquie Kelley, RN, urging nurse practitioners to apply for their own Medicaid provider number.

The minutes of the South Dakota Legislative Research Council were also reviewed. The bill of concern at that time was a pharmacy bill which would prohibit discriminatory pricing of pharmaceuticals by manufacturers and sellers. This bill would also effectively eliminate samples and free drug programs for the indigent in this state. At the time of this report this bill has been killed in committee. It is uncertain as to whether an effort to resurrect this bill will be made. The 4% medical provider tax has since been passed by both the House and Senate but is awaiting signature from the Governor. The commission had no idea that this bill would be introduced at the time of the commission meeting or else they would have at least voted differently in November.

A report from Dr Engelbrecht on the Medicaid pilot project was reviewed and will be updated later by Dr Engelbrecht elsewhere in the handbook. This program originated in Watertown and the Council has previously voiced concern over the rapid implementation and the fact that the program was moving too quickly without adequate time to analyze the data. The program administrators proclaim that there has been a \$120,000 savings since the implementation.

What they don't bother to tell you is that the "savings" are based on budgeted figures only and the actual expenditures increased \$54,415.

Concerns over language used in insurance company letters to patients regarding usual and customary fees were reviewed. A form "physician rebuttal letter to insurance companies" has been developed and previously distributed to the membership. Other actions that can be taken include notifying the

Division of Insurance of this matter and explaining the situation to patients with this certain type of insurance ahead of time. The particular insurance company that a member had problems with in this case was Time Insurance.

Respectfully submitted,
Cindy Weaver, MD, Chairman
Commission on Medical Services

The Reference Committee reviewed the report of the Commission on Medical Services and recommended it be accepted as submitted.

REPORT OF THE COMMISSION ON SCIENTIFIC MEDICINE

The Commission on Scientific Medicine convened on October 5, 1994, November 29, 1994 and January 11, 1995. During these meetings a great deal of discussion covered the upcoming State Medical Association meeting and presentation of the general session and concurrent sessions.

After reviewing suggestions from the 1994 annual meeting evaluations, the Executive Commission, the Commission on Medical Service, and from individual physicians and pharmaceutical companies, it was recommended to direct the focus of the scientific session to: "Cost Effective Health Care Delivery" and "The Information Superhighway in Medicine". The Commission also recommended a speaker for the general session who would be of general interest to physicians and spouses.

The Commission discussed the Executive Commission's recommendation that (1) physician registration include a banquet ticket and (2) they considered eliminating the banquet entertainment if high quality entertainment is not available. It appeared that there was very little difference in the number of individuals who attended the banquet under a blanket registration or a separate ticket registration. It was recommended by the Commission that the purchase of individual tickets be maintained for the 1995 meeting. Since entertainment is an expensive component of the banquet and high quality entertainment may not be available locally, the Commission recommended discontinuing entertainment at this year's banquet and reducing the cost of the banquet ticket.

The Commission explored providing information regarding the subject of Alternative Medicine. After some discussion, it was recommended that the Executive Office obtain information on location of resources regarding the efficacy of alternative types of medicine and make this available to the membership.

Respectfully submitted,
Angelina L. Trujillo, MD, Chairman
Commission on Scientific Medicine

The Reference Committee reviewed the report of the Commission on Scientific Medicine and recommended it be accepted as submitted.

REPORT OF THE COMMISSION ON INTERNAL AFFAIRS, COMMUNICATIONS AND LIAISON

The Commission met on Friday, October 28, 1994, and reviewed the report and suggestions from physicians who served as Doctor of the Day during the 1994 legislative session. Participation in the Doctor of the Day was quite successful. The Commission felt that the Doctor of the Day

was an excellent program and promotes invaluable public relations with the legislature. Dr. Martin J. Christensen again volunteered to supply sample medications for the office. The Commission also recommended that oral and/or nasal airway masks, ambu bags and a disposable electronic ear thermometer be purchased for the Doctor of the Day office which are not currently on the supply list. The Commission also reviewed the patient records form and felt that it was adequate and did not need any other additions or corrections.

Dean Krogman reported to the Commission regarding plans for the 1995 legislative session. Mr. Krogman indicated that the South Dakota Medical Association plans to submit legislation which would clarify the definition of surgery and also will submit any willing provider legislation. The South Dakota State Medical Association also is in the process of formulating a fax system and plans to distribute the "Grab Bag" to its members each Friday via fax. Hopefully this process will allow the State Medical Association to reach physicians' clinics more quickly for review and response on key contacts and initiatives which do need immediate attention. The Commission also discussed a letter from Dr. Reuben Bareis from Rapid City concerning incidents wherein pharmaceutical companies have paid pharmacists a \$35 fee for counseling services to switch patients from a drug that they are currently using to their product. Because of the pending legislation which refers to all forms of incentives offered by the drug industry the Commission decided not to respond until the outcome of the bill was determined.

The corporate price plan submitted by CommNet Cellular was reviewed noting that it is the South Dakota State Medical Association's policy not to endorse a particular product. A motion was made, seconded and carried that the information received from CommNet Cellular be available to the South Dakota Medical Association's membership, further noting that this is not an endorsement of the CommNet Cellular product but is a service that would enhance physician practice and should be made available to them.

Dr. Christensen indicated he had received information from the Executive Office regarding sponsorship of medical students by payment of the student's state and AMA dues. The Commission felt this was pro-active and was an excellent method of promoting early student involvement in the South Dakota Medical Association.

Respectfully submitted,

Martin J. Christensen, MD, Chairman
Commission on Internal Affairs, Communications
and Liaison

The Reference Committee reviewed the report of the Commission on Internal Affairs, Communications and Liaison and recommended it be accepted as submitted.

1995-1996 BUDGET

SOUTH DAKOTA STATE MEDICAL ASSOCIATION

GENERAL FUND

INCOME

ITEM	BUDGETED 1994-95	BUDGETED 1995-96
State Dues	\$345,000.00	\$345,000.00
Annual Meeting	35,000.00	35,000.00
Refunds & Misc.	20,000.00	22,000.00
Car Reimbursement	1,000.00	1,000.00
Continuing Medical Education	2,500.00	2,500.00

Salary Reimbursement	100,000.00	100,000.00
Other Programs		
Equip. Replacement Fund	1,000.00	1,000.00
Med. Student & Res. Dues	1,000.00	1,000.00
Interest	6,000.00	7,000.00
Accounting Service Income	2,000.00	1,000.00
Building Fund Transfer	<u>30,000.00</u>	<u>35,000.00</u>
	\$543,500.00	\$550,500.00

EXPENSES

ITEM	BUDGETED 1994-95	BUDGETED 1995-96
Salaries	\$250,000.00	\$270,000.00
Social Security	16,000.00	17,000.00
Legal & Audit	27,000.00	20,000.00
Telephone & Lease Payments	6,000.00	7,500.00
Office Supplies	12,000.00	12,000.00
Dues & Subscriptions	1,000.00	2,000.00
Physicians' Travel	19,000.00	19,000.00
Annual Meeting	25,000.00	25,000.00
Public Relations	15,000.00	10,000.00
Journal Subsidy	4,000.00	2,000.00
Postage	10,000.00	10,000.00
Miscellaneous	500.00	500.00
Legislation	12,000.00	12,000.00
Staff Travel	17,000.00	17,000.00
Insurance	4,000.00	4,000.00
Retirement/Fringe Benefits	70,000.00	75,000.00
Car Operation & Maintenance	2,500.00	1,000.00
Alliance Allocation	4,500.00	4,500.00
Unemployment Tax	750.00	500.00
Continuing Medical Education	1,500.00	1,500.00
Income Tax	500.00	500.00
Medical Student Support	3,500.00	3,500.00
Sales Tax	250.00	250.00
Printing & Reproduction	18,000.00	19,000.00
Deferred Comp. Exp.	<u>15,000.00</u>	<u>15,000.00</u>
	\$535,000.00	\$548,750.00
Reserve	<u>8,500.00</u>	<u>1,750.00</u>
	\$543,500.00	\$550,500.00

JOURNAL OF MEDICINE

INCOME

ITEM	BUDGETED 1994-95	BUDGETED 1995-96
Advertising	\$30,000.00	\$34,000.00
Subscriptions	1,300.00	1,200.00
Journal Subsidy	4,000.00	2,000.00
Miscellaneous	<u>400.00</u>	<u>200.00</u>
	\$35,700.00	\$37,400.00

EXPENSES

ITEM	BUDGETED 1994-95	BUDGETED 1995-96
Salaries	\$ 2,200.00	\$ 2,000.00
Legal & Audit	0	0
Social Security	125.00	125.00
Telephone	150.00	150.00
Postage	5,000.00	5,000.00
Office Supplies & Printing	27,500.00	29,000.00
Travel	<u>500.00</u>	<u>500.00</u>
	\$35,475.00	\$36,775.00
Reserve	<u>225.00</u>	<u>625.00</u>
	\$35,700.00	\$37,400.00

SOUTH DAKOTA

BUILDING FUND

INCOME

ITEM	BUDGETED 1994-95	BUDGETED 1995-96
Brzica Building	\$ 37,750.00	\$ 37,750.00
DakotaCare Rent	119,000.00	130,000.00
Foundation Rent	55,650.00	58,000.00
Board of Exam. Rent	13,503.00	14,000.00
Miscellaneous	100.00	100.00
	<u>\$226,003.00</u>	<u>\$239,850.00</u>

EXPENSES

ITEM	BUDGETED 1994-95	BUDGETED 1995-96
Property Taxes	\$30,000.00	\$32,000.00
Salaries	28,000.00	33,000.00
Social Security	3,200.00	3,500.00
Legal & Audit	4,000.00	4,200.00
Utilities	17,000.00	19,000.00
Maintenance & Supplies	26,000.00	30,000.00
Insurance	5,000.00	5,000.00
Mortgage Payments	78,000.00	78,000.00
Transfer to General Fund	<u>30,000.00</u>	<u>35,000.00</u>
	<u>\$221,200.00</u>	<u>\$239,700.00</u>
Reserve	<u>4,803.00</u>	<u>150.00</u>
	<u>\$226,003.00</u>	<u>\$239,850.00</u>

The Reference Committee reviewed the proposed budget for fiscal year 1995-96 and recommended acceptance of the budget as submitted.

REPORT OF THE COMMISSION ON PROFESSIONAL LIABILITY

The Commission on Professional Liability has continued to meet to follow-up on problems relating to professional liability for physicians in South Dakota. Liability companies doing business in South Dakota with the exception of The St. Paul Companies completed surveys, the results of which will be kept on file with the South Dakota Medical Association for anyone wishing to reference details on these malpractice insurance companies.

The Commission discussed other states' approaches to medical liability problems including the Nevada Medical/Legal Screening Panel. After discussion and input from South Dakota State Medical Association legal counsel, it was felt that there were many potential drawbacks to the Nevada system including such a system may not reduce costs for patients, hospitals, or physicians and implementation of the Nevada system in South Dakota is of doubtful constitutionality because of South Dakota's open court policy precluding pre-screening panels. It was the feeling of the Commission that the South Dakota State Medical Association should not pursue a Nevada type system at this time.

The Commission members continue to be concerned about the cost of defensive medicine estimated by the American Medical Association at \$15 billion per year. It is hoped that the point can be made that without continued attention to tort reform and capping of such things as non-economic damages, the cost of defensive medicine will continue to rise and be an important portion of the cost of supplying medical care in the United States.

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On a different topic, The St. Paul Companies have offered a program that will insure retired volunteer physicians for \$100 per year. This information is made available in the Grab Bag.

Members of the Commission continue to be very concerned about the cost of defensive medicine and the lack of reasonable caps on non-economic losses in malpractice suits. Future meetings will focus on these concerns and the influence of practice parameters on medical liability.

Respectfully submitted,
Douglas M. Traub, MD, Chairman
Commission on Professional Liability

The Reference committee reviewed the report of the Commission on Professional Liability and recommended it be accepted as submitted.

REPORT OF THE CONTINUING MEDICAL EDUCATION COMMISSION

During the past year the CME Commission met at the time of the Annual Meeting in Rapid City and subsequently in December via an audio teleconference. The Interim Report from Brookings Hospital was reviewed by a subcommittee and subsequently approved by the CME Commission as were the annual reports of all accredited sponsors. Prior to the first meeting, Charter Hospital voluntarily withdrew their accreditation status.

Site surveys were done at Sioux Valley Hospital and Prairie Lakes Hospital during the past year. By the time of the Commission's next meeting, North Central Heart Institute's site survey should also have been completed, weather permitting.

In addition to its sponsor review function, the Commission discussed policy issues related to CME including the AMA's Ethical Opinion 9.011 and the ACCME's new policy in which the potential conflict of interest of a speaker must be disclosed to participants prior to an accredited educational activity, whether commercial sponsorship is involved or not.

At the fall Council meeting, the Council discussed joint sponsorship, specifically as applied to non-accredited sponsors by the USD School of Medicine Office of CME and potentially by sponsors accredited by the SDSMA's CME Commission. The critical element, no matter who the accredited sponsor, for joint sponsorship is integral involvement in all phases of an accredited education activity, i.e. from initial planning through evaluation. Thus a program that is already planned and then brought to an accredited CME sponsor "to get credit" is never appropriate to receive AMA Category 1 credit. While such a program might qualify for AMA Category 2 credit, this has not gained popularity either locally or nationally.

At the spring Council meeting, the Council noted the admirable self regulating ability of CME, at both the state and national level. The CME Commission acknowledges this support and looks forward to its continuing work, including its own review this summer by surveyors who will evaluate the CME Commission's work on behalf of the ACCME's Committee on Review and Recognition (CRR).

Respectfully submitted,
Robert R. Raszkowski, MD, Ph.D., Chairman
Continuing Medical Education Commission

The Reference Committee reviewed the report of the Continuing Medical Education Commission and recommended the report be accepted as submitted.

REPORT OF THE BUDGET AND AUDIT COMMITTEE

The Budget and Audit Committee met January 26, 1995, to review the proposed budget for the 1995-96 year. Three separate budget agendas were discussed including the South Dakota State Medical Association general fund, the Journal of Medicine and the Building fund. Balanced budgets were reviewed for all three categories. It should be noted that salaries would be increased by approximately 8 percent from \$250,000 up to \$270,000. We are in the seventh year of a 15 year cycle to be debt free on payment of the building. It should be noted that rent from DakotaCare, the South Dakota Foundation for Medical Care and the Board of Medical Examiners contributes to the building fund budget and they share in administrative staff and equipment to help decrease the cost. The Journal of Medicine advertising income will be increased from \$30,000 up to \$34,000. All medical students will receive the Journal of Medicine. We will also be asking for student input in the future for the journal articles.

Respectfully submitted,
Martin J. Christensen, MD, Chairman
Budget and Audit Committee

The Reference Committee reviewed the report of the Budget and Audit Committee and recommended the report be accepted as submitted.

REPORT OF THE GRIEVANCE COMMISSION

The last meeting of the Grievance Commission was at the time of the annual meeting of the State Medical Association, June, 1994, in Rapid City. The complaints of the previous year were reviewed and found to have been satisfactorily concluded.

The Grievance Commission dealt with seven complaints as of the time of this report, and to date it appears that these complaints have been satisfactorily concluded. Again, the main difficulty has been basically problems in communication between patients and their physicians with some misunderstandings on the part of the patients and at times incomplete explanations on the part of the physicians. Many of these problems arise, not from fee considerations, but from less than optimal outcomes as viewed by the patient which frequently fall outside the control of a physician. We would again hope that members of the State Medical Association would go out of their way to insure that their patients are not only well informed but that they feel that they have some direct input into the decision making process as it concerns their health care or the health care of their loved ones.

We wish to sincerely thank Jan Anderson and her staff for their excellent help and assistance over the past year. I would like to personally thank all of the members of the commission for their diligence and thoughtful responses in the matters that have been brought before the Grievance Commission.

Respectfully submitted,
Michael W. Pekas, MD, Chairman
Grievance Commission

The Reference Committee reviewed the report of the South Dakota Political Action Committee and recommended the report be accepted as submitted.

REPORT OF THE SOUTH DAKOTA POLITICAL ACTION COMMITTEE

Again this year, your Political Action Committee was instrumental in uniting the many legislative concerns of the medical community into a powerful and, I might add, a fairly successful avenue of approach that allowed for the passage of favorable legislation and the defeat of some of the most onerous bills in recent memory.

Unfortunately, we have not seen the last of attempts at some form of "provider" tax, nor the intrusion into our office practice with rules and regulations that endeavor to usurp our trusted relationship with our patients.

Therefore, as each day goes by, your personal involvement becomes more and more critical and I would urge each of you to participate.

To those of you who have continued to be involved year after year in the political process, the medical profession and the country owe you a debt of gratitude!

A special THANKS to Dean Krogman for sharing his knowledgeable insight and political expertise. Also, again, thank you to the staff for bringing it all together, and a heart felt THANK YOU to those responsible citizens that can proclaim, "I BACK SODAPAC!"

Respectfully submitted,
Richard Porter, MD, Chairman
South Dakota Political Action Committee

The Reference Committee reviewed the report of the South Dakota Political Action Committee and recommended the report be accepted as submitted.

REPORT OF THE BOARD OF DIRECTORS OF THE SOUTH DAKOTA MEDICAL SCHOOL ENDOWMENT ASSOCIATION

The annual meeting of the Board of Directors convened on Friday, June 10, 1994, with the following members present: Doctors T. H. Sattler, Bruce Lushbough, Bruce Allen, Howard Saylor and Joseph Hamm. An interim meeting was held on August 16, 1994, with Doctors T. H. Sattler, Warren Jones, Bruce Lushbough and Bruce Allen participating.

Dr Ray Lynn, representing the USD School of Medicine, provided an update on student debt and student loan needs. The Board increased the maximum individual loan to \$2,500 per year with a four year maximum accumulated loans of \$10,000 per student. The Board allocated \$75,000 for student loans for 1994-95.

The Board reviewed donations for 1994 which were solicited by the USD Foundation. Because donations received through the Foundation were much less than donations received in past years when the Endowment handled their own solicitations, it was decided the Board should meet with Dean Talley and Bruce Froehlke, USD School of Medicine Director of Development, to discuss this further. Subsequently, when this meeting was held, the Board agreed to forego its own solicitations on behalf of the Endowment Association and allow the USD School of Medicine to include the Endowment in its solicitations, noting the emphasis of these solicitations would be for the new USD School of Medicine library/health information center. This is to be reviewed and discussed at the June, 1995, Board of Directors' meeting.

Board officers elected for 1994-95 were Dr T. H. Sattler, president; Dr Warren Jones, vice president; and Dr Bruce Lushbough, secretary-treasurer. Dr Hamm resigned as a Board member but was unanimously elected to emeritus membership.

Respectfully submitted,
T. H. Sattler, MD, President
South Dakota Medical School Endowment
Association Board of Directors

The Reference Committee reviewed the report of the Board of Directors of the South Dakota Medical School Endowment Association and recommended it be accepted as submitted.

REPORT OF THE PHYSICIANS' HELP COMMITTEE

Since assuming the responsibility as Chairman of the Physician's HELP Committee one year ago, I have devoted considerable effort to evaluating current and possible future activity. The meeting in Rapid City last June was helpful to the committee in setting some goals for the future. The HELP Committee was aware of the limitations of dealing with the impaired physician in distant locations with total voluntary help. The decision that came out of that meeting was to pursue the possibility of establishing a few centers around the state that could deal with this issue on a professional level.

Responses to letters sent to 25 hospitals around the state gave indication that these institutions, for the most part, were not prepared to deal with the issue on the staff level, much less be a potential source of help in a regional way.

About this time, the Nursing and Pharmacy Boards began to inquire about the possibility of joining forces in an attempt to address the challenge of the impaired professional. Following a preliminary discussion by those three entities, dentistry requested some information about the possibility of being involved in the same program. Further discussion has occurred with these four allied organizations and now legislation is being prepared to allow this to take place.

I believe this is a move in the right direction. It permits people with unique gifts, talents and interests to direct their attention to the impaired professional. It will allow us to develop a more professional program that should serve our state well. Many states have moved in this direction and we have been able to take advantage of their experience in developing this program. You will be hearing much more about this as the year progresses.

Respectfully submitted,
Donald M. Frost, MD, Chairman
Physicians' HELP Committee

The Reference Committee reviewed the report of the Physicians' HELP Committee and recommended it be accepted as submitted.

REPORT OF THE ARCHIVES AND HISTORY COMMISSION

The Archives and History Commission of the South Dakota State Medical Association has not had a formal meeting in the last year. However, a project involving the interviewing of physicians in the state that have retired or might be nearing retirement age continues. The interview encompasses not only the physician's history but his perspectives on the development of medicine in the State of

South Dakota and those that have practiced that art. We are considering expanding the interview process to include others that have had an impact on the practice of medicine in the state, that is, politicians and hospital administrators, for example.

Respectfully submitted

John H. Hoskins, MD, Chairman
Archives and History Commission

The Reference Committee reviewed the report of the Archives and History Commission and recommended it be accepted as submitted.

REPORT OF THE STATE HEALTH ADVISORY COUNCIL

The "Governor's" Advisory Commission was established by the 1992 Legislature and appointed by Governor Mickelson in July, 1992. It was reorganized by the 1994 Legislature and Governor Miller to its current form as an advisory council with somewhat ambiguous authority and responsibility. We are now serving under our third Governor in as many years making our current status even more unclear.

Because of the election, property tax reform, etc, the Council did not have a legislative package for the '95 session (as we had done the previous 2 years). We are now awaiting direction from Governor Janklow but already have these three areas to work on:

- 1) Managed Care Regulation
- 2) Definition of Nursing Home Moratorium Exemption
- 3) Evaluation of insurance reform for the medically uninsurable. A risk pool was established by the legislature in '94 but was lost in the video lottery financial shuffle.

The big question: Will the state of South Dakota attempt comprehensive health system reform?

Second question: If #1 is yes, how will SDSMA be perceived, as part of the problem or as part of the solution?

Respectfully submitted,

Thomas Krafka, MD, Member
State Health Advisory Council

The Reference Committee reviewed the report of the State Health Advisory Council and recommended it be accepted as submitted.

ANNUAL MEETING MINUTES SOUTH DAKOTA FOUNDATION FOR MEDICAL CARE

Thursday, June 8, 1995
9:00 a.m.

Ramkota Inn
Sioux Falls, SD

The 20th Annual Meeting of the South Dakota Foundation for Medical Care was held on Thursday, June 8, 1995, at 9:00 a.m., at the Ramkota Inn, Sioux Falls, SD.

The meeting was called to order by President Stephen Gehring, MD. The roll call was taken with the following members being present: Drs James Reynolds, Mary Carpenter, James Engelbrecht, Stephan Schroeder, Richard Holm, Michael Pekas, Thomas Krafka, James Hovland, Stephen Gehring, James Larson, Thomas Huber, Ken Bartholomew, Jeffrey Hagen, K. Gene Koob, Guy Tam, Lowell Hyland, C. Roger Stoltz, Daniel Kennelly, John Sall, Richard Renka, Carol Zielike, Scott Eccarius, Charles Hart, Richard Krafka, James Collins, Ben Henderson, Kevin Bjordahl, Joe Chang, Roger Carter, Steven Feeney, Aaron Shives, Robert Rietz, Mark Belyea, Louis Karlen, Michael Haley, Angelina Trujillo, Lawrence Finney, Khristine Lindo, Robert Vandemark, Jr, Jessie Easton, James Ryan, William O. Rossing, K-Lynn Paul, Donald Knudson, David Bean, Robert Thompson, Frank Messner, Robert Ferrell, Tom Hermann, Victoria Herr, Douglas Traub, Richard Porter, Larry Meyer, O. Myron Jerde, R. G. Nemer and Dale Gunderson.

The President declared a quorum present for the purpose of conducting business of the corporation.

The President called for consideration of the minutes of the last annual meeting. He referred the membership to the Foundation minutes in the printed manual furnished to each member. It was moved and seconded that the minutes be accepted as published and the reading thereof waived. Upon voice vote the same was approved unanimously.

Dr Gehring reported that the following persons were nominated for vacant terms of three years on the Board of Directors: Lori A. Hansen, MD; Steven P. Feeney, MD; Dave R. Johnson, MD; Douglas M. Traub, MD; and Thomas M. Dean, MD. There being no other nominations, the following persons were declared elected to serve on the Board of Directors: Lori A. Hansen, MD; Steven P. Feeney, MD; Dave R. Johnson, MD; Douglas M. Traub, MD; and Thomas M. Dean, MD.

Dr Gehring called for consideration of the financial report. He noted that the financial report was published and was furnished to each member of the body. Dr Gehring asked the membership if there were any questions, qualifications, or corrections. There being no comments, the financial report was accepted as published.

The membership was referred to the written report submitted by the President, and published in the Handbook, and also the written reports contained in the Handbook of the Foundation's Medical Director and Principal Clinical Coordinator. Dr Gehring asked if anyone had any questions on the operations of the Foundation. There being none, he noted that the reports would be filed with the records of the Foundation.

Dr Gehring asked for the consideration of other business. There being none, the meeting was adjourned at 10:10 a.m.

Gregg Tobin, MD
Secretary

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ANNUAL MEETING MINUTES
SOUTH DAKOTA STATE MEDICAL HOLDING
COMPANY, INC.

Thursday, June 8, 1995
10:15 a.m.

Ramkota Inn
Sioux Falls, SD

The 7th Annual Meeting of the South Dakota State Medical Holding Company, Inc., was held on Thursday, June 8, 1995, at 10:15 a.m., at the Ramkota Inn, Sioux Falls, South Dakota.

The meeting was called to order by President Robert Ferrell, MD. The roll call was taken with the following members being present: Drs James Reynolds, Mary Carpenter, James Engelbrecht, Stephan Schroeder, Richard Holm, Michael Pekas, Thomas Krafska, James Hovland, Paul Eckrich, Stephen Gehring, James Larson, Thomas Huber, Ken Bartholomew, Jeffrey Hagen, K. Gene Koob, Guy Tam, Lowell Hyland, C. Roger Stoltz, Daniel Kennelly, John Sall, Richard Renka, Carol Zielike, Scott Eccarius, Charles Hart, Richard Kafka, James Collins, Ben Henderson, Kevin Bjordahl, Joe Chang, Roger Carter, Steven Feeney, Aaron Shives, Robert Rietz, Mark Belyea, Louis Karlen, Carey Buhler, Michael Haley, Angelina Trujillo, Lawrence Finney, Kristine Lindo, Dana Windhorst, Robert VanDemark, Jr, James Ryan, Karla Murphy, William O. Rossing, K-Lynn Paul, Donald Knudson, David Bean, Greg Schroeder, Robert Thompson, Jem Hof, Frank Messner, Julie Stevens, Robert Ferrell, Jeanne Bennett, Tom Hermann, Victoria Herr, Douglas Traub, Richard Porter, Larry Meyer, H. Lee Ahrlin, Michael Elston, O. Myron Jerde, R. G. Nemer and Dale Gunderson.

The President declared a quorum present for the purpose of conducting business of the corporation.

The President called for consideration of the minutes of the last annual meeting. He referred the membership to the SDSMHC minutes in the printed manual furnished to each member. The minutes were accepted as published and the reading thereof waived.

Dr Ferrell reviewed one item of business from the last corporate body meeting. This business dealt with entering into negotiations with the Presentation Health System regarding their participation in Dakota Health Plans, pending advice of counsel. Under a letter dated May 26, 1995, DAKOTACARE received the advice from counsel on the anti-trust implications of such negotiations. Dr Ferrell shared the contents of this letter with the corporate body. Dr Ferrell shared the contents of this letter with the corporate body. Dr Ferrell also indicated that this information had been discussed at the June 7th DAKOTACARE Board of Directors meeting and it was the recommendation of the Board members that this information be provided to the Dakota Health Plans' Board of Directors for their review and action as they felt necessary.

Dr Ferrell reported on the election results for the vacant positions on the Board of Directors. The following persons were nominated for the election to the Board of Directors by the Nominating Committee: Robert Ferrell, MD; Ben Henderson, DO; Douglas Holum, MD and Gerald Tracy, MD. Dr Ferrell indicated no other nominations had been received from the membership. There being no further nominations, the following persons were declared elected to serve on the Board of Directors: Robert Ferrell, MD; Ben Henderson, DO; Douglas Holum, MD and Gerald Tracy, MD.

Dr Ferrell reviewed the financial report as published in the Handbook with the membership. Dr Ferrell asked the membership if there were any questions concerning qualifications of or corrections to the financial report. There being no comments, the financial report was accepted as published.

Dr Ferrell then provided a brief history on how DAKOTACARE was established and how the corporation has matured to the present state of its operations. He also discussed with the corporate body members the recent valuation of the company and the Class C preferred stock performed by the Corporate Finance Department of Dain Bosworth, Inc. Information regarding the value of the Class C preferred stock was provided to all existing and eligible shareholders under a letter dated May 19, 1995. DAKOTACARE is in the final stages of selecting a broker to facilitate trades in the Class C shares when trades can be accomplished. Dr Ferrell also indicated that the Board of Directors may recommend a stock split which would take the stock down to a level that it will sell and trade more easily. Dr Ferrell discussed the steps necessary for the Board to follow in order to incorporate the recommendations from Dain Bosworth. Dr Ferrell asked for any comments from the floor. Questions and comments from the floor were addressed by Dr Ferrell and Robert Johnson.

Dr Ferrell asked for any other business. There being none, the meeting was adjourned at 9:30 a.m.

Guy Tam, MD
Secretary

MINUTES OF
SOUTH DAKOTA MEDICAL SERVICE, INC.
CORPORATE BODY MEETING

9:45 a.m.

Thursday, June 8, 1995

Ramkota Inn
Sioux Falls, SD

Chairman Finney called the meeting of the Corporate Body of South Dakota Medical Service, Inc., to order at 9:45 a.m., June 8, 1995, at the Ramkota Inn, Sioux Falls, South Dakota.

On roll call vote, the following members of the Corporate Body of the South Dakota Medical Service, Inc., were present: Doctors James Reynolds, Mary Carpenter, James Engelbrecht, Stephan Schroeder, Richard Holm, Michael Pekas, Thomas Krafska, James Hovland, Paul Eckrich, Stephen Gehring, James Larson, Richard Holm, Thomas Huber, Ken Bartholomew, Jeffrey Hagen, K. Gene Koob, Guy Tam, Lowell Hyland, C. Roger Stoltz, Daniel Kennelly, John Sall, Richard Renka, Carol Zielike, Scott Eccarius, Charles Hart, Richard Kafka, James Collins, Ben Henderson, Kevin Bjordahl, Joe Chang, Roger Carter, Steven Feeney, Aaron Shives, Robert Rietz, Mark Belyea, Louis Karlen, Carey Buhler, Michael Haley, Angelina Trujillo, Lawrence Finney, Kristine Lindo, Dana Windhorst, Robert VanDemark, Jr., Jessie Easton, C. F. Gutch, James Ryan, Karla Murphy, William O. Rossing, K-Lynn Paul, Donald Knudson, David Bean, Greg Schroeder, Robert Thompson, Jem Hof, Frank Messner, Julie Stevens, Robert Ferrell, Jeanne Bennett, Tom Hermann, Victoria Herr, Douglas Traub, Richard Porter, Larry Meyer, H. Lee Ahrlin, Michael Elston, O. Myron Jerde, R. G. Nemer, Dale Gunderson, and students Brian Knutson and Eric Kelts.

A quorum being present, the Chairman declared the annual meeting of the membership of the Corporate Body of the South Dakota Medical Service, Inc., to be duly in Session for the transaction of business.

Chairman Finney presented the Chairman's message to the Corporate Body and noted the complete message was printed in the Handbook.

No action being necessary on the Chairman's report, none was taken.

Chairman Finney addressed the recent resignations of Blue Shield's top officers, and presented Phil Davis as Blue Shield's Chief Executive Officer, Steve Vlk as Chief Marketing Executive, Charles Hendrickson as Chief Financial Executive, Dick Gregerson as legal counsel, and Rebecca Gauthier as recording secretary. He welcomed them to their new positions and thanked them for their dedication to Blue Shield. He also extended his appreciation to the Board of Directors.

Dr Michael Pekas moved that the reading of the minutes of the last meeting of the Corporate Body, being the 1994 annual meeting, be waived, the same having been published and mailed to each member previously. Such motion was seconded by Dr Jeffrey Hagen. Upon voice vote, the same was approved unanimously.

Chairman Finney called upon President Phil Davis to review the 1994 Annual Report. Mr Davis noted that each of the members were sent a copy of Blue Shield's annual statement for 1994 prior to this meeting. He highlighted certain items contained therein. He specifically mentioned that the Blue Shield 1994 premium income of \$59,803,691 and claims paid of \$55,375,192 shows that 92.6% of premium income was paid back to our subscribers. Blue Shield's underwriting gain (loss) in 1994 was (\$1,373,023) or (2.3%) of premium income, and its investment income was \$1,392,882. After deducting \$9,800 Federal Income Taxes, the net gain to surplus was \$10,059 or .02% of income. In 1994, Blue Shield processed 944,427 claims. Blue Shield's total admitted assets as of December 31, 1994, were \$29,729,666.

With no questions being addressed from the floor, Mr Davis concluded his report.

Chairman Finney, at this point of the meeting, stated the next order of business was the election of directors. He asked Dr Rossing to present the report of the Nominating Committee. Dr Rossing reported as follows:

Members of the Blue Shield Board of Directors are elected to three year terms. Members may hold four consecutive terms.

The Nominating Committee appointed by the Blue Shield Board of Directors recommended current Directors Thomas Huber, MD, James Larson, MD, Ronold Tesch, MD and Mrs Linda Mickelson, be re-elected to the Board of Directors.

The Chairman called for nominations from the floor. No nominations were received from the floor. Dr Larry Meyer moved current Directors Thomas Huber, MD, James Larson, MD, Ronold Tesch, MD and Mrs Linda Mickelson be re-elected to the Board of Directors. Dr James Reynolds seconded the motion. Upon voice vote, the same was approved unanimously.

The Chairman called for any further business to come before the Corporate Body. there being none, he called for a motion to adjourn the Corporate Body meeting. Dr Tom Huber moved the meeting be adjourned. Dr Ronold Tesch seconded the motion. Upon voice vote, the same was approved unanimously.

Steven Vlk
Vice President and
Chief Marketing Officer Secretary

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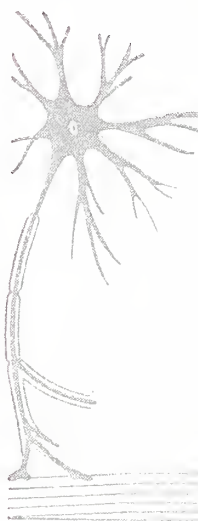
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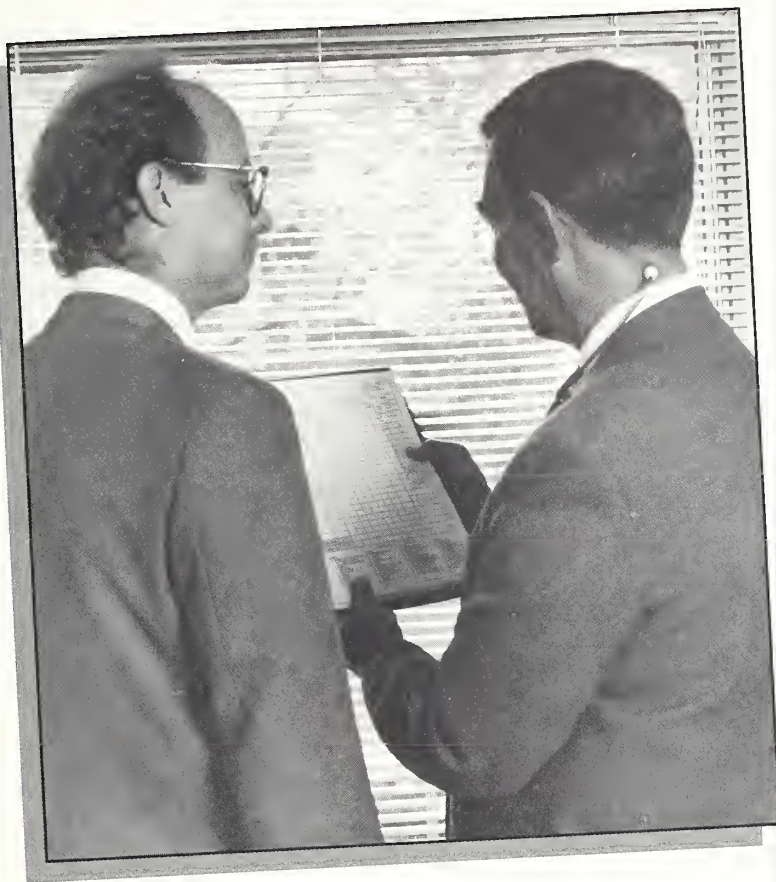
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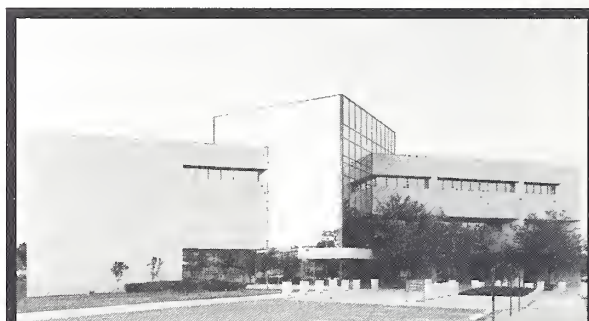
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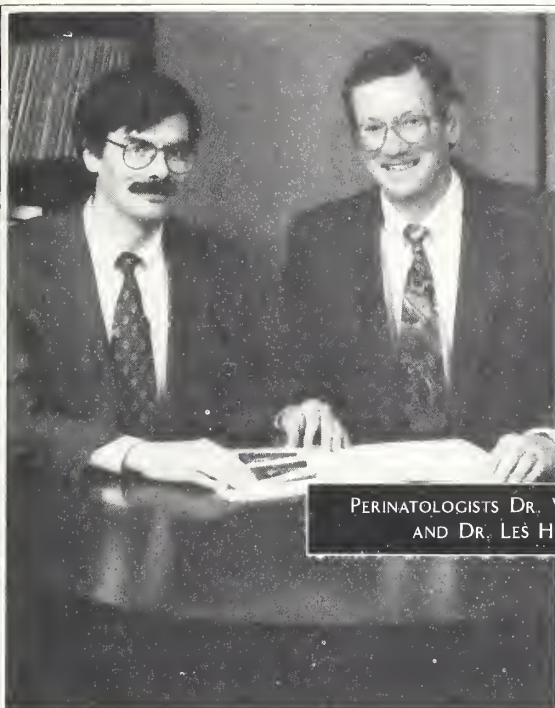
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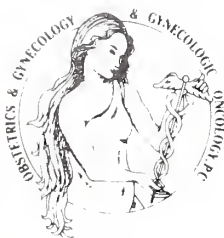
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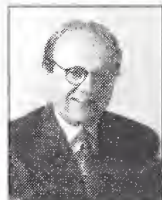
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 George, Robert J. Sioux Falls
 *Gerber, Bernard C. Aberdeen
 Gerber, Jean L. Aberdeen
 *Gere, Richard G. Mitchell
 Gerhart, Victoria Dakota Dunes
 Gerrish, Catherine C. Watertown
 Gerrish, Edwin S. Watertown
 Gesink, Melvin Watertown
 Gibson, Robert Rapid City
 Giebink, Patricia Sioux Falls
 *Giebink, Robert R. Sioux Falls
 *Gilbert, Freeman J. Belle Fourche
 Gill, Timothy J. Rapid City
 Gillis, Floyd D., Jr. Mitchell
 Gilmore, Howard T. Yankton
 Giridhar, Sanjeevi Aberdeen
 Giuseffi, Steven A. Spearfish
 Goff, Steven K. Rapid City
 Golliher, Warren N. Spearfish
 Gotbaum, Irwin Brookings
 Graber, Terry M. Custer
 Graff, Randall P. Deadwood
 Graham, Donald B. Sioux Falls
 Green, Marc A. Sioux Falls
 *Greenfield, Duane L. Sioux Falls
 *Gregg, John B. Sioux Falls
 Gregg, Mark Sioux Falls
 Greineder, Juergen Gregory
 Griffin, John Sioux Falls
 Groeger, Thomas Deadwood
 Groote, Curtis A. Rapid City
 *Gross, H. Phil CA
 *Grove, M. Stuart Sioux Falls
 *Gryte, Clifford F. Huron
 Guerin, Michael, J. Jr. Huron
 Gunderson, Dale E. Rapid City
 Gunnarson, Richard E. Sioux Falls
 *Gutch, Charley F. Sioux Falls
 Gutnik, Leonard M. Sioux Falls
 Gutnik, Steve H. Sioux Falls
 Gwinn, Charles B. Fort Meade

Haas, Stephen N. Rapid City
 Haatvedt, C. B. Huron
 Habbe, Donald Sioux Falls
 Hafner, Daniel J. Rapid City
 Hagen, Jeffrey B. Sioux Falls
 Haley, Michael D. Mitchell
 Hall, Barbara Sioux Falls
 Halma, Gary Sioux Falls
 Halverson, Kenneth Yankton
 Halvorson, Ronald D. Sioux Falls
 *Hamm, Joseph N. Rapid City
 Hammer, Bryan J. Sioux Falls
 Hanna, Marwan Sioux Falls

Hansen, Craig K. Rapid City
Hansen, Lori Yankton
Hanson, Bernie H.P. Watertown
Hanson, Charles Rapid City
Hanson, George R. Custer
Hanson, Jeffrey W. Huron
Hanson, William O. Huron
Hardie, Richard D. Sioux Falls
*Hare, Helen Jane Rapid City
Harlow, Mark C. Aberdeen
Harlow, Mark L. Rapid City
Harms, Robert W. Sioux Falls
Harris, Frederick L. Sioux Falls
Harris, Mary H. Sioux Falls
Harris, Russell H. Sioux Falls
Hart, Charles E. Rapid City
Hart, Christine R. Sioux Falls
Hart, Harvey J. Aberdeen
Hartmann, Alfred E. Sioux Falls
Hartzell, Allan J. Sioux Falls
Hassan, Adel A.F. Madison
Hata, Steven K. Rapid City
Hayes, Craig R. Spearfish
Head, Stephen Mobridge
Heddlestone, Leslie N. Sioux Falls
Hedges, Craig P. Sioux Falls
Heiling, Karen Sioux Falls
Heilman, Bernard F. Madison
Heinemann, Daniel J. Canton
Heintz, Douglas J. Rapid City
Heisinger, Randolph W. Aberdeen
*Held, Gordon GA
Held, William E. Sioux Falls
Henderson, Ben J. Mobridge
Henrickson, Lynn A. Sioux Falls
Henrickson, Robert G. Sioux Falls
*Henry, Robert B. Brookings
Henry, Scott D. Sioux Falls
Herbst, John W. Rapid City
Hercules, Costas Rapid City
Herlihy, John J. Rapid City
*Hermann, Harland, Sr. Rapid City
Hermann, H. Thomas, Jr. Sturgis
*Hermanson, John M. Brandon
Herr, Victoria A. Rapid City
Herrin, Gerald R. Pierre
Hewitt, Gregory Spearfish
*Hewitt, John Rapid City
Hibbard, Michael D. Sioux Falls
Hick, Daniel Yankton
Hicks, Paula Yankton
Hicks, Terry Rapid City
Hieb, Richard Brookings
Hill, Laurie Sioux Falls
Hiltunen, Scott J. Yankton
Hinkson, Terry D. Rapid City
Hockett, Richard D. Mitchell
Hof, Jem Yankton
Hofer, Catherine Sioux Falls
Hofer, Daryls R. Sioux Falls
*Hofer, Emil A. Huron
Hoffman, Wendell W. Sioux Falls
Hoffsten, Phillip E. Pierre
Hofmann, Alfred R. Rapid City
Hogue, Michael E. NE
Hohm, Byron T. Sioux Falls

Hohm, Paul H. Huron
Hohm, Robert C. Huron
*Hohm, Theodore A. Huron
Holkesvik, Reid E. Aberdeen
Holland, Lambert W. Chamberlain
Holloway, James J. Deadwood
Holm, Richard P. Brookings
Holte, Michael J. Aberdeen
Holum, Douglas M. Mitchell
Holzwarth, David R. Yankton
Honke, Richard W., II Parkston
Horner, William J. Sioux Falls
Horning, James R. Watertown
Hosen, Richard S. Sioux Falls
Hoskins, John H. Sioux Falls
Hoversten, David L. Sioux Falls
Hovland, James I. Aberdeen
Howard, Ben J. Rapid City
Howard, Richard J. Sioux Falls
Howard, William J. Rapid City
Howe, Jerome K. Mitchell
Hoxtell, Eugene O. Sioux Falls
Huber, Joel B. Miller
Huber, Thomas J. Pierre
Hubner, Jay W. Yankton
*Huet, William G.M. Huron
Hugo, Chris F. Deadwood
Humphreys, Donald W. Sioux Falls
Hunt, Ralph E. Chamberlain
Huot, Samuel W. Rapid City
*Huppler, Edward G. MN
Hurley, Brian T. Sioux Falls
Hurley, Christopher Sioux Falls
Hurley, Dominic Sioux Falls
Hurley, Timothy E. Sioux Falls
Hussain, Rif'at Sioux Falls
Hyland, Lowell J. Sioux Falls

Isburg, Carroll D. Yankton
Iverson, Gregory J. Rapid City

Jackson, James W. Rapid City
Jacobs, Tad B. Flandreau
Jacobson, Theodore R. Hot Springs
*Jahraus, R. Curtis Pierre
*James, Edward H. Rapid City
Jameson, G. Malcolm Yankton
*Janavs, Visvaldis FL
*Janis, John B. Sioux Falls
Janss, Gerti J. Rapid City
Janusz, Albin J. Aberdeen
Jaqua, Richard A. Sioux Falls
Jassim, Ali D. Sioux Falls
Jenny, David Yankton
Jensen, Richard A. Sioux Falls
Jenter, George W. Sturgis
Jentes, Paul K. Sturgis
Jerde, O. Myron Rapid City
Jerstad, John P. Sioux Falls
Johnson, Daniel C. Yankton
Johnson, Dave R. Rapid City
*Johnson, Edward A. Milbank
Johnson, Jorge H. Sioux Falls
Johnson, Kenneth M. Watertown
Johnson, Mark W. Sioux Falls
Johnson, P. Steven Rapid City

Johnson, R.C. Sioux Falls
Johnson, Robert K. Rapid City
Johnson, Thomas C. Brookings
Johnson, Virginia P. Vermillion
Jones, D. Brynley Platte
Jones, James A. Watertown
Jones, John B. Chamberlain
Jones, Warren L. Sioux Falls
*Jones, William E. Sturgis
*Judge, John O. AZ
Justice, Michael W. Dell Rapids

Kafka, Richard Gregory
*Kalda, Ellison F. Platte
Kalda, Ellison F., II Sioux Falls
Kangley, Daniel J. Sioux Falls
Kannan, Hari D. Sioux Falls
Kaplan, Richard Yankton
Kapur, Hiroo R. Huron
Kapur, Ravi Huron
Karl, Stephen, R. Sioux Falls
Karlen, Louis W. DeSmet
Kass, Joseph Rosholt
Kaufman, Irvin I. Freeman
Keegan, James M. Rapid City
*Kelley, Donald H. Deadwood
Kelts, K. Alan Rapid City
Kemp, Earl D. Sioux Falls
Kennelly, Daniel J. Sioux Falls
Keppen, Bruce Aberdeen
Keppen, Laura Sioux Falls
Keppen, Michael Sioux Falls
Kerr, James Yankton
Kidman, Brian K. Sioux Falls
Kihne, Michael Sioux Falls
*King, Lyndon M., Jr. Sioux Falls
King, Patrick H. Yankton
Kirtton, Kenneth Freeman
*Kittelton, H. Otis Sioux Falls
*Klar, Werner Fort Meade
Knecht, John F. Martin
*Knowles, Jeffrey J. Rapid City
Knowles-Smith, Peter ND
Knudson, Donald H. Sioux Falls
Knutson, Dennis D. Sioux Falls
Knutson, Roger S. Rapid City
Kofoed, Lial Sioux Falls
Kohl, David A. Madison
Kom, Carlton J. Aberdeen
Koob, K. Gene Sioux Falls
*Koren, Paul H. Rapid City
Kosina, Thomas Winner
Koss, Francis D. Sioux Falls
Kosse, Karl H. Aberdeen
Kovarik, Joseph A. Rapid City
*Kovarik, Richard A. Rapid City
Kovarik, Stephen M. Rapid City
*Kovarik, Wenzel J. Sturgis
Krafka, Thomas L. Rapid City
Kreger, Donald Sioux Falls
Krizan, Kelly J. Pierre
Krohn, David C. Yankton
Krome, Lori, A. Dell Rapids
Kullerd, Deborah Deadwood
Kummer, Mark Sioux Falls
Kundel, David Mitchell

Kundel, Robert R.Chamberlain
Kunkel, Shirley..... Sioux Falls
Kunkel, Steve..... Sioux Falls
Kunz, James A.Rapid City
Kurch, Julie Ann Huron
Kutayli, Farid Sioux Falls
Kwan, Francis P.Rapid City

Labesky, James Sioux Falls
Labine, Barry A.Rapid City
Lakstigala, Peters E. Sioux Falls
Lamb, Marlin R. Aberdeen
*Lampert, Arthur A., Jr. Rapid City
*Lampert, Arthur A., Sr. Rapid City
Landreth, Knute, Jr. Huron
Lang, David A.Rapid City
Lang, Terry A. Sioux Falls
Lankhorst, Barry J. Sioux Falls
Laput, Aleksandra M. Sioux Falls
Larsen, David Sioux Falls
Larsen, Laura J.R. Sioux Falls
Larson, Gregory R. Watertown
Larson, James C. Watertown
Larson, Paul M. Watertown
Lauer, David A. Sturgis
Lawler, Patrick J. Sioux Falls
*Lee, Si Gaph AZ
Leland, Dennis G. Mitchell
Lele, Shrirang M. Huron
*Leon, Paul R. Aberdeen
Lewis, Charles A. Sturgis
Liedtke, Curtis J. Sturgis
Likness, Clark W. Watertown
Lindbloom, Brent Pierre
Lindbloom, Buron O. Pierre
Linde, Leonard M. Mobridge
Lindo, Khristine C. Sioux Falls
Linn, Bernard Pierre
Liudahl, Jeffrey Yankton
Lockwood, Scott A. Sioux Falls
Lockwood, William W. Sioux Falls
Loewen, Nathan H. Huron
Looby, Thomas L. Sioux Falls
Loos, Charles M. Rapid City
Loperena, Rudolf Wagner
*Lopez, Alberto Hot Springs
Lord, Charles J. Rapid City
Lorenzen, Kim Mitchell
Lovrien, Fred C. Sioux Falls
Lowe, Phillip Yankton
Lushbough, Bruce C. Brookings
Lustig, Karl A. Spearfish
Luzier, Thomas L. Aberdeen
Lynch, Patrick Aberdeen

Mabee, Judson O. Mitchell
Mabee, Lee M. Sioux Falls
Mabee, Mark J. Yankton
*Mabee, Oscar J. Mitchell
MacDougall, James Aberdeen
MacRandall, Daniel G. Sioux Falls
Madison, Dean L. Sioux Falls
Magidson, Melvin A. Sioux Falls
Magnuson, Gregory L. Sioux Falls
Mahnke, Mark W. Sioux Falls
Malek, Michel Aberdeen

Mallek, John A. Sioux Falls
Malm, John A. Gregory
Malters, David T. Mitchell
Malters, Patricia B. Mitchell
Mangulis, George J. Philip
Manlove, Stephen Rapid City
Mannes, Bruce Yankton
Margallo, Lucio N., II..... Mitchell
Mark, Curtis L. Viborg
Maroun, Christiane Mitchell
Marten, Brian R. Sioux Falls
Massopust, Steven Rapid City
Masterson, Thomas E. Sioux Falls
Matheny, Theodore Chamberlain
Mathews, Michael J. Rapid City
*Mattson, William J. Rapid City
Matushin, Clifford Aberdeen
Mayo, Chester W.P. Aberdeen
McBride, Alexander Spearfish
McCafferty, James D. Rapid City
McCafflin, Richard Sioux Falls
McFee, John Bowdle
McGrann, James R. Sioux Falls
McGreevy, Patrick S. Sioux Falls
*McGuigan, Patrick Rapid City
McGuire, Michael P. Rapid City
McHale, Michael S. Sioux Falls
*McHardy, Bryson R. Aurora
*McIntosh, George F. Eureka
McKenney, Janice M. Huron
McKenzie, Mark K. Mitchell
McKercher, Scott W. Sioux Falls
McKichan, John M. Aberdeen
McLaughlin, Ruth M. Spearfish
McMenamy, Kandi R. Sioux Falls
McMillin, J. Michael Sioux Falls
McVay, Michael R. Yankton
McVeety, Roderick Spearfish
McWhirter, Robert E. Mitchell
Megard, Daniel J. Yankton
Mendoza, Eric F. Aberdeen
Messner, Frank D. Yankton
Meyer, Larry A. Rapid City
Meyer, Robert D. Sioux Falls
*Meyer, Robert J. Watertown
Meyer, Vaughn H. Sioux Falls
Mikkelsen, Beth Sioux Falls
Millea, Roger P. Rapid City
Milroy, Mary J. Yankton
Minder, Jim L. Pierre
Minnhaar, Guillermo T. Huron
Minton, Timothy P. Rapid City
Mitchel, Pat W. Burke
Moench, Jerry L. Sioux Falls
Mogen, Mark P. Aberdeen
Mohama, Riyad Sioux Falls
Mohler, Charles W. Sioux Falls
Monfore, James E. Armour
*Monson, Charles D. Parkston
Morgan, Timothy J. Sioux Falls
Morris, Alan D. Sioux Falls
Morse, Peter H. Sioux Falls
Mortimer, Sam L. Rapid City
*Mueller, Eric H. Tripp
Mulder, David Pine Ridge
Mullins, John R. Rapid City

Munson, David P. Sioux Falls
*Munson, H. Benjamin Rapid City
Murphy, Karla K. Sioux Falls
Murray, Jeffrey A. Sioux Falls
Mutch, Milton G., Jr. Sioux Falls
Myrmoe, Arlin Aberdeen

Nagelhout, David Sioux Falls
Naughton, Gregory Sioux Falls
Nedved, Lonnie J. Mitchell
Neidich, Gary A. Sioux Falls
Nelmark, Robert A. Sioux Falls
Nellans, Frank Mitchell
Nelsen, Marcia Yankton
Nelson, David C. Sioux Falls
Nelson, Earl G. Watertown
Nelson, Lawrence F. Webster
Nelson, Patrick A. Sioux Falls
Nelson, Richard A. Sioux Falls
Nelson, Robert E. Sioux Falls
Nemer, Raymond G. Gregory
Nesbit, Dennis Rapid City
Neu, Norman D. Rapid City
Neubauer, Jo Marie Yankton
Neumayr, Robert J. Yankton
Nice, Richard F. Sioux Falls
Nicholas, George A. Huron
Nielsen, James L. Dell Rapids
Nielsen, Mark W. Sioux Falls
Nipe, Hollis Watertown
Nixon, Robert B. Rapid City
Nord, Allen E. Rapid City
Nord, Wesley J. Sioux Falls
Nordstrom, Donald G. Sioux Falls
Nussbaum, David..... Sioux Falls

Oakland, James A. Sioux Falls
O'Brien, Charles P. Sioux Falls
O'Brien, Kristin Rapid City
O'Brien, Peter J. Sioux Falls
Ochsner, John A. Sioux Falls
O'Dea, Maureen T. Watertown
Odland, Winston B. Aberdeen
Oesterheld, Jessica R. Sioux Falls
Oey, David L. T. Sisseton
Ofstein, Lewis C. Sioux Falls
Ohrt, David W. Sioux Falls
Olegario, Filemon E., Jr. Mitchell
Oliver, Donald E. Rapid City
Olson, Brad L. Sioux Falls
Olson, Jennifer J. Sioux Falls
Olson, Michael L. Sioux Falls
Olson, Paul J. Sioux Falls
Olson, Steven P. Sioux Falls
Olson, Thomas H. Vermillion
*Opheim, Warren L. Sioux Falls
Opheim, Warren O.V. Sioux Falls
Oppenheimer, Mark Sioux Falls
Orr, Russell T. Sioux Falls
O'Shea, Timothy T. Sioux Falls
Ostby, Jason R. Watertown
Ostrowski, Susan M. Eureka
Ottenbacher, John Selby
*Owen, Gordon S. Rapid City
Owens, Leycester, Jr. Sioux Falls
Owens, Raymond Pierre

Papendick, Lew Rapid City
 Park, Dai H. Pierre
 Parker, Jeffrey C. Spearfish
 Parry, Rodney R. Sioux Falls
 *Pasek, Edward A. Sioux Falls
 *Patt, Walter AR
 *Patterson, David M. Redfield
 Paul, K-Lynn Sioux Falls
 Paulson, Brad A. Sioux Falls
 Payne, Harlan A. Sioux Falls
 Pederson, Kim A. Sioux Falls
 *Peik, Donald J. FL
 Pekas, Michael W. Sioux Falls
 Perpich, Mark S. Watertown
 Pesce, Ulises Pierre
 Peshek, Ramona Watertown
 *Peterait, Martin F. Sioux Falls
 *Peters, Edward H. Sioux Falls
 Peters, Patricia A. Sioux Falls
 Peterson, Karl G. Sioux Falls
 Peterson, Kenneth B. Watertown
 Peterson, Linda R. Watertown
 Peterson-Henry, Terri A. Sioux Falls
 Picardi, Edward Rapid City
 Pinter, Jeffrey D. Winner
 Pitt-Hart, Barry T. Sioux Falls
 Plummer, Richard L. Sioux Falls
 Pochop, Cindi J. Pierre
 Poling, Tamara L. Rapid City
 Polizzi, Raymond A. Hot Springs
 *Porter, Maynard Parkston
 Porter, Richard I. Fort Meade
 Potas, David G. Yankton
 Preston, Robert Rapid City
 Preys, Michael C. Watertown
 Propp, Daniel E. Rapid City
 Purdy, Drew A. Rapid City
 Purinton, Scott Britton
 Putnam, Wesley D. Sioux Falls

Quinlan, E. Denise Sioux Falls
 *Quinn, Robert H. Spearfish

Rabenberg, Rita Sioux Falls
 Radack, Morris L. Yankton
 Ramirez, Dionisio R. Hoven
 Ramos, Manuel D. Scotland
 Ramsay, John D. Brookings
 Randall, Bradley B. Sioux Falls
 Randall, Gordon R. Watertown
 Ranney, Brooks Yankton
 Rasmussen, Paul Mitchell
 Raszkowski, Robert R. Sioux Falls
 Rath, G. Daniel Canton
 Raymond, Louis C. Rapid City
 *Reagan, James L. Sioux Falls
 *Reaney, Duane B. Yankton
 Reding, Arthur P. Marion
 Redmond, Steven Aberdeen
 Redmond, Warren J. Aberdeen
 Reed, Richard H. Huron
 Regier, Eugene R. Canton
 Reiffenberger, Daniel Watertown
 Reiffenberger, Sarah Watertown
 Reiners, Michael H. Sioux Falls
 Renka, Richard P. Rapid City

Renner, L. Mark Sioux Falls
 Retterath, Patrick Watertown
 Rey, Daniel A. MO
 Reynen, Paul D. Sioux Falls
 Reynolds, Glenn T. Rapid City
 Reynolds, James R. Sioux Falls
 Reynolds, Tom R. Sioux Falls
 Rezkalla, Maher Sioux Falls
 Rhoades, Marques E. Yankton
 Richards, George A. Sioux Falls
 Richardson, James L. Sioux Falls
 Richardson, Michael T. Pierre
 Ridder, Glenn A. Sioux Falls
 Ridgway, Tim M. Yankton
 Ries, Dennis D. Freeman
 *Riesberg, Elsa TX
 Rietz, Robert R. Brookings
 Rittmann, John E. Watertown
 Robbins, John K. Sioux Falls
 Roberts, Bob H. Spearfish
 *Roberts, Charles S., Jr. Brookings
 Robinson, Michael Sioux Falls
 Rodig, Mark Sioux Falls
 Rodman, Peter K. Sioux Falls
 Rogotzke, Kenneth H. Watertown
 Rolfsmeyer, Eric S. Sioux Falls
 Ronan, Kevin P. Sioux Falls
 Rosario, Elmo J. Rapid City
 Roseth, Calvin Watertown
 Rossing, David R. Sioux Falls
 Rossing, William O. Sioux Falls
 Rossing, William R. Sioux Falls
 Rost, Michael C. Sioux Falls
 Rowen, John P. J. Sioux Falls
 Rud, James A. Rapid City
 Rud, John M. Rapid City
 Ruggles, James Yankton
 *Ryan, James E. Sioux Falls
 Ryan, John J. Sioux Falls
 Rydberg, Mitchel L. Dell Rapids

Sabow, John D. Rapid City
 Sahl, William J., Jr. Rapid City
 Salem, Anthony G. Sioux Falls
 Sall, John C. Sioux Falls
 Salmela, Steven R. Sioux Falls
 Saloum, Herbert A. Tyndall
 Sample, Richard G. Madison
 Sanchez, Gonzalo M. Sioux Falls
 Sanchez, Jorge D. Sioux Falls
 *Sanders, Mary E. Redfield
 *Sanderson, Everett W. Sioux Falls
 Sandvik, David E. Rapid City
 Sanmartin, Jorge E. Rapid City
 Santella, Robert N. Sioux Falls
 Saoi, Nicasio B. Yankton
 Sarfarazi, Faith A. Brookings
 *Sattler, Theodore H. Yankton
 Savonen, Steven J. Rapid City
 Saxena, Satish C. Brookings
 Saylor, Howard L., Jr. Huron
 *Schabauer, Ernest A. Mitchell
 Schad, C.S. Rapid City
 Schafer, Larry W. Sioux Falls
 *Scheffel, Alvin R. Redfield
 Schellpfeffer, Donald Sioux Falls

Schossow, George Brookings
 Schramm, Melanie Winner
 Schroeder, Greg Sioux Falls
 Schroeder, Michael R. Sioux Falls
 Schroeder, Stephan D. Miller
 Schuft, James Sturgis
 Schultz, Gregory A. Sioux Falls
 Schultz, Richard D. Sioux Falls
 Schultz, Thomas A. Sioux Falls
 Schutz, Robert J. Rapid City
 Schwartz, John C. Watertown
 *Seaman, David Spearfish
 *Sebring, Floyd U. MN
 Seeman, Terry Watertown
 Seger, Yvonne B. Sioux Falls
 Seidel, Robert R. Sioux Falls
 Sejvar, Joseph P. Rapid City
 Seljeskog, Edward L. Rapid City
 Shafer, Charles Sioux Falls
 Shannon, Thomas H. Fort Meade
 Shapiro, Ronald B. Sioux Falls
 Shaskey, Robert E. Brookings
 Shields, David Sioux Falls
 Shining, H. Streeter Rapid City
 Shives, Aaron Watertown
 Shreves, Howard B. Sioux Falls
 Sigman, Robert K. Sioux Falls
 Simmons, Jerry L. Sioux Falls
 Simmons, Lynn M. Rapid City
 Simmons, Matthew E. Rapid City
 Sittner, Larry Sioux Falls
 Skelly, Milton E. IL
 *Skogmo, Bernhoff R. Mitchell
 Slama, David D. Rapid City
 Slattery, Mary T. Sioux Falls
 Slingsby, J. Geoffrey Rapid City
 Small, Donna M. Britton
 Smith, A. Donald Sioux Falls
 Smith, Barry A. Spearfish
 Smith, David A. Yankton
 Smith, Janet E. Sioux Falls
 Smith, Lowell D. Watertown
 *Smith, Richard N. Huron
 Smith, R. Maclean Sioux Falls
 Smith, Sandra B. Sioux Falls
 Sneed, Diane Sioux Falls
 Snortum, Robert Sioux Falls
 Snyder, Wayne E. Watertown
 Solberg, Lloyd E. Sioux Falls
 Sorenson, Arne C. Sioux Falls
 Sorrels, William F. Mitchell
 Soundy, Timothy J. Sioux Falls
 Soye, Andrew I. Sioux Falls
 Spahn, Martin S. Rapid City
 Spangler, John G. Rapid City
 Spears, Barbara Pierre
 Spencer, Suzannah H. Sioux Falls
 Sprik, Calvin Yankton
 *Stahmann, Fred S. Sioux Falls
 Stanage, Willis F. Yankton
 Stassen, Michael D. Sioux Falls
 Statz, Michael Rapid City
 Steele, Granville H. Aberdeen
 *Steidl, Lester J. CO
 *Steiner, Peter K. CA
 Stenberg, Jon R. Rapid City

Stensland, Vernon H. Sioux Falls
 Stensrud, Homer J. Sioux Falls
 Stephenson, Daryl R. Yankton
 Sternquist, John C. Yankton
 Steska, Stephen Watertown
 Stevens, Dennis C. Sioux Falls
 Stevens, Julie C. Vermillion
 Stocks, Steven C. Rapid City
 Stokka, Cameron Sioux Falls
 Stoltz, C. Roger Sioux Falls
 Stone, Kurt Rapid City
 Story, Amanda J. Sioux Falls
 Stout, Stephen Y. Pierre
 Strand, Ray D. Rapid City
 Stransky, John J. Watertown
 Strawbridge, Lawrence Sioux Falls
 Strong, Lori Rapid City
 Suga, Robert C. Sioux Falls
 Sullivan, Daniel J. Rapid City
 Sutliff, Willis C. Rapid City
 Suurmeyer, Robert D. Aberdeen
 *Swanson, Charles L. Pierre
 *Sweeney, Lloyd J. Sioux Falls
 Sweet, Edwin P. Burke
 Swisher, Lowell P. Kadoka

Tackett, Daniel M. Rapid City
 Talley, Robert C. Sioux Falls
 Tam, Guy E. Sioux Falls
 Tan, Raymundo T. Aberdeen
 *Taylor, William R. Aberdeen
 Teixeira, Jose Rapid City
 Tervo, Raymond C. Sioux Falls
 Tesch, Ronald R. Brookings
 Teuber, Larry L. Rapid City
 Thanel, Fredric H. Sioux Falls
 *Theissen, Hubert H. Rapid City
 Thomas, David Sioux Falls
 Thompson, M. George Watertown
 *Thompson, Marion C. Watertown
 Thompson, Robert F. Yankton
 Thompson, Vance Sioux Falls
 Tibbitts, G. Michael Sioux Falls
 Tidd, John T. Yankton
 Tieszen, Arden J. Pierre
 Tieszen, Jerel E. Sioux Falls
 Tieszen, Myles E. Yankton
 Tillan, Maria Rapid City
 Timmerman, Gary Watertown
 Tjarks, Brian Mitchell
 Tobin, Gregg M. Winner
 Tobin, Michael D. Sioux Falls
 Tracy, Gerald E. Watertown
 Traub, Douglas Rapid City
 Travers, Henry Sioux Falls
 Trinidad, Reuben B. CO
 Truh, Lois I. Huron
 Trujillo, Angelina Sioux Falls
 Tschetter, Loren K. Sioux Falls
 Tschetter, Richard T. Sioux Falls
 Tschetter, William R. Rapid City
 Tschida, Brian Rapid City
 Tuan, Chung H. Yankton
 Turner, Charles R. Vermillion
 Turner, Gerald Brookings

Uken, Patsy A. Sioux Falls
 Uthe, Craig J. Sioux Falls
 Vaca, Anthony M. Sioux Falls
 Vanadurongvan, Kanya Milbank
 Vanadurongvan, Vichit Milbank
 VanDemark, Robert, Jr. .. Sioux Falls
 *VanDemark, Robert, Sr. .. Sioux Falls
 VanderWoude, John Sioux Falls
 VanderWoude, Larry B. Sioux Falls
 VanErdewyk, John M. Mitchell
 VanErt, Gary P. Chamberlain
 VanEtten, Donald D. Rapid City
 VanGerpen, Sandra Pierre
 VanSloun, Wm. MN
 Vaska, Kevin J. Sioux Falls
 Vaughn-Whitley, Kelly E. ... Rapid City
 Venugopal, Muthugounder .. Brookings
 Vick, Martin Aberdeen
 Vidoloff, John Aberdeen
 Vincent, Martin C. Sioux Falls
 *Visani, Sandro Mitchell
 Vizcarra, Dale E. Pierre
 Vizcarra, Rodney T. Pierre
 *Vogele, Alvin Glenham
 *Vogele, Cleo L. Aberdeen
 Vogele, Kenneth A. Rapid City
 Vogt, H. Bruce Sioux Falls
 *Volin, Verlynn V. Sioux Falls
 Vonk, Galen Sioux Falls
 *Vose, James L. NE
 Vosler, Steven T. Spearfish

Wachs, David M. Aberdeen
 *Wagner, Loyd R. Sioux Falls
 Wake, Richard A. Brookings
 Waldby, Gail E. M. Huron
 Wallace, James W. Sioux Falls
 Waltman, Steven E. Rapid City
 Waltner, Lonnie L. Bridgewater
 Walton, Jerry L. Sioux Falls
 Warren, Merritt G. Brookings
 Watson, Mary Canton
 Watson, William J. Sioux Falls
 Watson, William V. Sioux Falls
 Watt, Bruce A. Sioux Falls
 *Weatherill, Donald W. Mitchell
 Weaver, Cynthia Rapid City
 Weber, Scott A. Wagner
 Wegner, Edward Watertown
 *Wegner, Karl H. Sioux Falls
 Wehrkamp, Larry Sturgis
 Weitzenkamp, Larry A. Martin
 Wellman, Lawrence R. Sioux Falls
 Wells, John M. Yankton
 Welsh, Gary L. Rapid City
 Welter, Randal Sioux Falls
 Welty, Edith R. Rapid City
 Welty, Thomas K. Rapid City
 Wenger, Robert S. Sioux Falls
 Wengs, William J. Sioux Falls
 Werth, Roger W. Aberdeen
 *Werthmann, Hubert E. Pierre
 Wessel, Alvin E. Rapid City
 West, David Sioux Falls
 *Westaby, Robert S. Rapid City

Wetzberger, Wayne Madison
 Wheeler, Kirke H. Sioux Falls
 White, Thomas C. Sioux Falls
 Whitney, David B. Rapid City
 *Whitney, Nathaniel R. Rapid City
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CME Conferences

CME Conferences being held on a regular basis at various health care facilities throughout the state of South Dakota.
(1 hour AMA Category credit available unless otherwise specified)

CME CONFERENCES

AUGUST 1995

August 15	Endorama (Endocrinology Conference) - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
August 17	Geriatric Forum - 7:00 am, RDTA Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
August 16	CPC Wednesday Noon Conference - 12:00 noon, 4th Floor Conference Rooms, Speaker: John Sall, MD; Topic: Enuresis; Info: David Rossing, MD 331-3490.

- August 16 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Topic: Clinical Pathology Conference, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- August 17 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- August 17 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- August 17 **Neuroscience Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- August 18 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- August 18 **Bipolar Treatment Update for Geriatric Patients** - Fort Meade VA, Fort Meade, contact: Candy Benne, 347-7153 * 6144.
- August 18 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- August 23 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, MD, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- August 23 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- August 24 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- August 24 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- August 24 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- August 28 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145
- August 30 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: William Fuller, Topic: Depression & Antidepressants in Geriatrics, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- August 31 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- August 31 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.

SEPTEMBER 1995

- September 1 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- September 6 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Ann K. Church, MD; Topic: Multiple Gestations; Info: David Rossing, MD 331-3490.
- September 6 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- September 7 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- September 7 **Cath Conference** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Alice Glirbas - 333-2766.
- September 7 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- September 7 **Clinical Pathology Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: to be announced, Topic: to be announced, Info: Dr's J. Ruggles & R. Thompson, 665-9002.
- September 7 **Biomedical Ethics** - East Auditorium, Rapid City Regional Hospital, Info: Medical Staff Office - 341-8705.
- September 8 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- September 8 **Pathology Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- September 11 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145
- September 12 **Breast Cancer Conference** - 12:00 noon, Meeting Room B, Sioux Valley Hospital, Info: Dr. Thomas Cink - 333-5244.
- September 13 **CPR Certification/Recertification** - 7-10:00 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351, Ext. 313.
- September 13 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- September 13 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: K. Gene Koob, MD, Topic: Parkinson's Disease, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- September 13 **Dermatopathology Conference** - 7:30 am, SVH Pathology Conference Room 1513 Info: Joan - 333-1730.
- September 14 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- September 14 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- September 14 **Cardiac Cath Conference** - 7:30 a.m., McKennan Hospital Auditorium, Info: Cardiopulmonary Dept, 339-8171.
- September 14 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- September 14 **Internal Medicine, Tumor Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: To be announced, Topic: To be announced, Info: Dr. J. Ruggles & Dr. R. Thompson, 665-9002.
- September 15 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- September 15 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.

- September 19 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- September 20 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, to be announced, to be announced, Info: David Rossing, MD 331-3490.
- September 20 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Clinical Pathology Conference, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- September 20 **Geriatric Forum** - 7:00 am, RDT Network Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- September 21 **Neuroscience Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- September 21 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- September 21 **Cath Conference** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Alice Glirbas - 333-2766.
- September 21 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- September 22 **Tumor Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351.
- September 22 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- September 25 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Surgical Section, 347-7145
- September 27 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: Willa Hsueh, MD, Topic: Challenge in Clinical Practice: Changing the Natural History of Coronary Artery Disease, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- September 27 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- September 28 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- September 28 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- September 28 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- September 28 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- September 29 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.

MISCELLANEOUS

SEPTEMBER

- September 10-13 **New Technology, New Ideas: Solution to Managed Care—4th Annual National Medical Information Networking Conference**, Red Lion Hotel, Omaha, NE. Fee: \$445. AMA Category 1 credit avail. Contact: Ctr for Cont Educ, Univ of Neb Med Ctr, 600 S 42nd St, Box 985651, Omaha, NE 68198-5651. Phone: (800) 642-1095.
- September 15 **Contemporary Issues in Hemodialysis**, Sheraton Midway, St. Paul, MN. AMA Category 1 credits avail. Contact: Hennepin County Medical Ctr, Off of Academic Affairs, 701 Park Ave, Mail Code 869-A, Minneapolis, MN 55415-1829. Phone: (612) 347-2075.
- September 21 **Gastroenterology in a Changing Primary Care Environment**, Omaha Marriott, Omaha, NE. Fee: \$20. AMA Category 1 credit avail. Contact: Ctr for Cont Educ, Univ of Neb Med Ctr, 600 S 42nd St, Box 985651, Omaha, NE 68198-5651. Phone: (800) 642-1095.
- September 25-30 **Emergency Medicine 1995: Skills and Knowledge for the Practicing Physician**, UNMC, Ctr for Cont Educ, Omaha, NE. Fee: \$800. Contact: Ctr for Cont Educ, Univ of Neb Med Ctr, 600 S 42nd St, Box 985651, Omaha, NE 68198-5651. Phone: (800) 642-1095.
- September 30 **Oncology For The Gatekeeper**, Ritz-Carlton Hotel, St Louis, MO. AMA Category 1 credit avail. Contact: Cathy Sweeney, Off of CME, Washington Univ School of Med, Campus Box 8063, 660 S Euclid Ave, St. Louis, MO 63110-1093. Phone: (800) 325-9862.
- Sept 30 - Oct 1 **Anesthesiology Conference**, Marriott Hotel, Omaha NE. AMA Category 1 credit avail. Contact: Sally C. O'Neill, Ph.D., Assoc Dean, Creighton Univ CME Div, 601 N 30th St, Suite #2130, Omaha, NE 68131. Phone: (800) 548-2633.

OCTOBER

- October 5-6 **Annual Forensic Science Seminar**, Pillsbury Aud, Hennepin County Med Ctr, Minneapolis, MN. Contact: Hennepin County Med Ctr, Off of Academic Affairs, 701 Park Ave, Mail Code 869-A, Minneapolis, MN 55415-1829. Phone: (612) 347-2075.
- October 5-7 **Contemporary Cardiothoracic Surgery**, Ritz Carlton Hotel, St. Louis, MO. AMA Category 1 credit avail. Contact: Cathy Sweeney, Off of CME, Washington Univ School of Med, Campus Box 8063, 660 S Euclid Ave, St. Louis, MO 63110-1093. Phone: (800) 325-9862.
- October 7-11 **6th Biannual Gastroenterology Board Review Course**, Grand Hyatt, Washington, DC. AMA Category 1 credit avail. Contact: Maria Gorrick, The George Washington Univ Med Ctr, Off of CME, 2300 K St, NW, Washington, DC 20037. Phone: (202) 994-4285.
- October 13-14 **Genetics in Clinical Practice**, Cornhusker Hotel, Lincoln, NE. Fee: \$60. (In conjunction with the Nebraska/Missouri football game.) Contact: Ctr for Cont Educ, Univ of Neb Med Ctr, 600 S 42nd St, Box 985651, Omaha, NE 68198-5651. Phone: (800) 642-1095.
- October 13-15 **Advances in Sonography**, Sheraton Chicago Hotel and Towers, Chicago, IL. Contact: Suzanne Bohn, Exec Dir, Society of Radiologist in Ultrasound, 1101 Market St, Philadelphia, PA 19107. Phone: (215) 574-3183.
- October 19-22 **Heartland Rural Health Forum**, Hyatt Regency Crown Center Hotel, Kansas City, MO. Fee: \$175. Contact: National Rural Health Assoc, One W Armour Blvd, Suite 301, Kansas City, MO 64111. Phone: (816) 756-3140.



**Susan Tjarks, President, South Dakota
State Medical Association Alliance**

Alliance Launches S.A.V.E. Program (Stop America's Violence Everywhere)

Shot fired in drug dispute; hits, kills 12-year-old girl

Teenagers die in gang attack

Abused wife almost got away

12-year-old held in stabbing

Boy, 13, fatally shot near school

Man held in 12-year-old's slaying

All of these headlines appeared in the Chicago Tribune over two consecutive days last year. They weren't front-page copy. In fact they were in section 2, atop brief paragraphs buried in the "Metropolitan Report." These crimes will not receive the publicity that has surrounded the O. J. Simpson trial, however, the violence that took the lives of these women and children was no less deadly.

We, South Dakotans, tend to have a sense of security, knowing that our newspapers are not filled with this magnitude of violent crimes. But we should not let that lead us to believe that we are somehow exempt from violence in our state. The startling statistic that should shake us all into an awareness is that safehouses and shelters for battered victims in the state of South Dakota recorded over 46,000 shelter nights last year. In fact, family violence touches the lives of more than 60 million Americans each year and homicide is among the five leading causes of death in childhood.

For this reason, the Medical Alliance has decided to launch a unifying project nationwide that addresses our concerns regarding violence. It will be called S.A.V.E. (Stop America's Violence Everywhere). Central to the program is SAVE Today which, beginning October 11, 1995, will be held annually on the second Wednesday of October to emphasize violence prevention in communities nationwide. Like "The Great American Smokeout", sponsored by the American Cancer Society, it will be the goal of the AMA Alliance to have a day set aside that will focus solely on ending the violence that comes into our lives daily. Alliances everywhere will plan activities for SAVE Today such as taking the "I Can Choose" work book into classrooms; asking students to sign pledges to help prevent violence; urging television and radio stations to eliminate violent programming for one day, etc. In South Dakota, State Health Promotions Co-Chairs, Helen Owens and Collette Madison have planned a statewide candlelight vigil, and have asked all Alliance members across the state to place a lighted candle in their windows on October 11 to remind others of the need to Stop America's Violence Everywhere. Of course this must be publicized in the media so that people know what the candles are for, and the more people that we can encourage to participate, the more effective we will be. For that reason, I am asking all physicians as well to place a lighted candle in your office or office window to also commemorate this day.

I remember having a conversation several years ago with Dr Pat Malter of Mitchell. She had met recently with the Medical Association's Commission on Legislation and Governmental Relations. They had discussed at the time developing a massive public relations campaign across the state that would promote the physician as a compassionate, caring person. The figure that they were prepared to spend on such a campaign would amount to \$50,000. She commented that maybe we should be promoting physicians' images by spending that money to help address a societal concern. By doing so, we would also be showing the caring and compassionate nature of the South Dakota physician.

In my opinion, the statewide "Domestic Violence: FACE THE PROBLEM" campaign and other projects like SAVE will do just that. People will begin to recognize the physicians and their families as the benevolent and concerned people that they are. So please join with us as we promote SAVE Today, October 11, 1995. Together we can really make an impact.

Susan Tjarks

South Dakota Foundation for Medical Care

Partners in Patient Care Improvement

Some physicians have asked for more information on what is to be expected when physicians and hospitals elect to collaborate with South Dakota Foundation for Medical Care on a particular patient care improvement project.

Health Care Quality Improvement Projects are designed as partnerships between physicians, hospitals, and SDFMC. The partners agree on the aspects of care that may need improvement and mutually develop quality indicators. Using the quality indicators, data is collected and analyzed to confirm the need for improvement. A plan is developed to improve the system of care. The last stage of the improvement project involves the use of indicators to measure success.

It is anticipated that it should take approximately nine months from the time the partnership is engaged between physicians, hospitals, and SDFMC to the time the hospital and physicians develop plans for improving the systems of care. This timeline is advantageous to the hospital as it utilizes the examination of patient care issues that are relatively recent.

Action plans made by hospitals and physicians are actually patient care enhancement opportunities. Several hospitals may find similar areas where process of care will be changed, however, it is expected that action plans will be tailored to the individual facility and will involve personnel from multiple departments. SDFMC is available to assist facilities in this important process.

In helping with the development of a successful action plan, the following 11 elements are offered for possible consideration by the physicians and hospitals:

- 1) What is the issue? Can it be broken down into parts that help explain the systems involved?
- 2) What is the expected outcome? Have goals been stated in a way that success can be measured or objectively demonstrated?
- 3) Have all the parties involved in the pattern been involved in the action plan development?
- 4) Who is responsible for the overall plan and who is responsible for implementing each component?
- 5) When will the action plan be implemented?
- 6) How, when, and who will monitor the plan?
- 7) What tools will be utilized to monitor the intervention and how will they help to measure the level of success and achievement of the set goals?
- 8) What actions will be taken and by whom if issues exist that the action plan does not address or if parties needing to change resist the changes?
- 9) How will the findings be reported to SDFMC departments, health care providers, and physicians?
- 10) Are there timelines and deadlines to assure completion?
- 11) How will the project be finalized and what is the target date?

South Dakota Foundation for Medical Care, physicians, and hospitals have an extraordinary opportunity to create a partnership for better care from which they and patients will benefit.

Gerald E. Tracy, MD
Medical Director

Another Episode in the Continuing Conflict

My last editorial described the threat of Vancomycin resistant enterococci (VRE). I am going to follow that with a brief description of another equally serious problem—penicillin resistant *Streptococcus pneumoniae* or pneumococcus (PRSP).

In the past decade, first in Africa and Spain and then in the United States, pneumococci have become resistant not only to penicillin but increasingly to chloramphenicol, clindamycin, erythromycin, tetracyclines, rifampin, TMP/SMX (trimethoprim-sulfamethoxazole) and finally extended spectrum cephalosporins mostly through alteration of penicillin binding proteins or production of enzymes such as chloramphenicol acetyl transferase.¹

The resistance to penicillin has been described as intermediate and high. However, intermediate resistance to penicillin may be associated with high level resistance to cephalosporins.

Similar to VRE, PRSP are often not detected by commercial microdilution panels commonly used in many laboratories.² There is a reference broth microdilution procedure employing Mueller-Hinton broth supplemented with 2% to 3% lysed horse blood with a specific inoculum density and incubation for 20 to 24 hours at 35 degrees C. The reagents for this method are somewhat difficult to obtain so that many laboratories prefer to use a disk diffusion method with a standard McFarland density inoculum and incubation for 20 to 24 hours at 35 degrees C. in 5% CO₂ on Mueller Hinton sheep blood agar. The oxacillin rather than penicillin disk is used with a breakpoint equal to or greater than 20mm. Such strains are uniformly susceptible to penicillin or other B-lactam antimicrobials including amoxicillin and most cephalosporins. Those with inhibition 19mm or less may have variable resistance to penicillin.³

The drawbacks of the disk diffusion test are that it cannot distinguish borderline, intermediate or highly penicillin resistant strains and cannot determine with predictable accuracy resistance to other antibiotics including extended spectrum cephalosporins.

To obtain more quantitative results, a modification of disk diffusion testing called the E test which utilizes an impregnated graduated commercially available plastic strip to read bacterial inhibition in minimal inhibitory concentrations or MIC. Various antibiotics can be measured but penicillin, cefotaxime or ceftriaxone, erythromycin, vancomycin, and TMP/SMX are commonly chosen for use in the E test depending on preferences. Tetracycline, clindamycin and other antimicrobials are also available for E testing.

There is general agreement that all pneumococci isolated from blood, cerebrospinal fluid or sterile body sites should be screened by the oxacillin disc and those with less than 20mm of inhibition are subjected to the E test. However, as the number of PRSP increase in incidence, isolates from sputum or other sites may require screening depending on the local incidence of PRSP which can be determined by periodic surveys using the oxacillin disk diffusion method. At the present time, our rate of PRSP is well below 5% and we have elected to do periodic surveys for PRSP rather than test all isolates.

John F. Barlow, MD
Editor, SDJM

REFERENCES

1. Breiman RF, et al: Emergence of drug resistant pneumococcal infections in the United States. *JAMA* 1994;271:1831-1835.
2. Jorgensen JH, et al: Development of interpretive criteria and quality control limits for broth microdilution and disk diffusion antimicrobial susceptibility testing of *Streptococcus pneumoniae*. *J Clin Microbiol* 1994;32:2448-2459.
3. Jorgensen JH, Doern GV: Practical Guidelines for In Vitro susceptibility of selected Grampositive Bacteria. *Clin Micro Newsletter* 1995;17:81-85.

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Insuring Healthcare Personnel and Their Facilities

Correspondence

To: Dr Freeman, Editor

I was challenged by your editorial in the June issue of the Journal. Perhaps the perspective of a physician who practices less in a hospital environment would be helpful.

While I also have been involved in patients experiencing the kind of "wild death" that Daniel Callahan and others have bemoaned, there are at least two other models.

Many more patients are dying in nursing homes without being sent to hospitals for their final hours or days. At Good Samaritan Center Nursing Home in Sioux Falls 52 deaths were noted in 1994, of this total all but 3 occurred in the nursing home. Many (79%) were anticipated by staff and the efforts to contact family and attending physician were generally successful. Thirty-five percent of families were at the bedside at the time of the patient's demise.

While most people dying in nursing homes are quite elderly, this is not always the case. The age range of patients dying at Good Samaritan Center in 1994 was 51 years to 104 years.

Another choice for patients, families and physicians is hospice. Hospice patients frequently have a very different dying experience than those who spend their last days in a high tech hospital setting. While hospice has traditionally been associated with people dying of cancer, patients with all diagnoses are accepted. My personal experience of dealing with patients with advanced dementia has shown me how valuable hospice can be with this particular diagnosis.

I also am somewhat concerned about the editorial comment, "It is particularly interesting how some religious groups have come to equate maximal medical/technical intervention as always being in the service of reverence for life and thus mandated." I presume this refers to groups generally associated with the philosophy of "right to life" or perhaps with the Catholic church and its long tradition of reverence for life.

While the living will document suggested by the National Right to Life Committee includes a statement on the "general presumption for life", it does not preclude advanced directives that would include a limited treatment plan for patients in a terminal condition.

Catholic institutions operate in compliance with what is known as the *Ethical and Religious Directives of Catholic Health Facilities*. This document is promulgated by the National Conference of Catholic Bishops. It in no way precludes advanced directives that would mitigate against the kind of "wild death" Callahan and others fear. Indeed the Catholic Hospital Association has a preprinted advanced directive form that includes

options for no CPR and withdrawal of treatment that likely is having marginal or no benefit.

Lastly, I am somewhat concerned about Callahan's assertion that little time is spent in medical education actually teaching about the dying process and optimal care methods. As medical education moves out of the hospital and into the office and other ambulatory locations medical student and resident experiences with hospice, dying in the nursing home, home visits, office discussion of advanced directives before a critical event and training in the biopsychosocial model is increased. Learners are developing new attitudes knowledge and skills relative to care of the dying patient and support of the family as well as understanding of physician feelings of guilt and powerlessness.

I would invite other readers of the Journal to share their experiences and knowledge in this important area of medicine.

Sincerely,

D. A. Brechtelsbauer, MD

Associate Director

USD School of Medicine

Sioux Falls Family Practice Residency

Nominations Are Needed

The Annual Dr Robert Hayes Memorial Award for Outstanding South Dakota Rural Health Care Provider will be presented by the South Dakota Academy of Physician Assistants at the South Dakota Rural Health Conference in November.

The award is based upon nominations citing the attributes that make that provider an exceptional health care worker. Among those features necessary to be considered for the award is a compassionate, caring nature Dr Hayes so epitomized. All health care providers in rural South Dakota, from emergency care to home health to mid-level practitioners and physicians, are eligible for this honor.

Please send your nominations by October 1, 1995 to:

**Jan Hines, CNP, PA-C, Award Chairperson
8326 N. Blucksberg Mtn. Rd
Sturgis, SD 57785**

MealMate: Improving the Nutritional Status of Elders Using a Milk-Based Nutritional Supplement

Susan L. Schrader, Ph.D; Melody Schrank, RD; Rebecca Blue, RN, MS; Edward T. Zawada, Jr, MD; Angelina L. Trujillo, MD; and Fred K. Alavi, Ph.D

ABSTRACT

MealMate was a longitudinal research project conducted by the staff at the Geriatric Health Institute, a joint venture between Sioux Valley Hospital and the University of South Dakota School of Medicine. During Fall 1994, 64 older adults enrolled in this nutrition study at a Sioux Falls congregate dining site and drank a half-pint of whole milk combined with Carnation Instant Breakfast daily for one month. Pre-test and post-test data collected included anthropometric measures, specific blood tests from a venipuncture blood draw and use of standardized instruments to assess nutritional risk, depression, mental status and general demographic information.

Results suggest that a longitudinal study with elders can be done effectively (attrition rate of less than 11%). While elders were very healthy at the onset, they nevertheless showed improved nutritional status over time. Laboratory tests showed significant increases in Vitamin D levels in adults over age 79. Using a more malnourished, home-bound sample of elders over age 79 and adding only whole milk to their diets are discussed as possible considerations for future research.

INTRODUCTION

Maintaining good nutritional health can be challenging at any age, but certainly becomes more complex as a person ages. For elders, several factors work against the simple function and pure pleasure of eating they may have enjoyed in earlier years. Physical factors such as chronic illness, immobility, medications or dementia put an elder at risk for poor nutritional health. These factors may be complicated by loneliness, isolation or depression and amplified by social situations such as a loss of spouse or limited finances.¹

Moreover, a national priority in the Title XX Older Americans Act has been the funding of Congregate Dining and Home-Delivered Meal Programs. Those nutritional programs were established to combat the incidence of older Americans experiencing higher rates of illness, longer convalescence, anemia, mental depression and protein deficiency due to inadequate nutritional intake. Yet, more than two decades have passed, and older Americans still face these same effects of poor diet.

Research has identified that the most important factor in malnutrition in the elderly is inadequate ingestion

of calories.^{2,3} Researchers at the Geriatric Health Institute conjectured that the simple addition of a nutritional supplement into the diets of elders participating in the Congregate Dining Program might not only provide additional calories but increase intakes of protein, calcium and Vitamin D, thereby improving overall nutritional health.

Carnation Instant Breakfast (CIB) combined with whole milk was chosen as an intervention. (see Appendix A) This product is readily accessible in grocery stores and comes in individualized serving packets of assorted flavors. Whole milk was selected because of its caloric content and because studies have shown some older adults to experience less lactose intolerance from whole milk as opposed to other, lower-fat content milks such as 2% or skim.⁴⁻⁶ When combined with 1/2 pint of whole milk, Carnation Instant Breakfast (Milk/CIB) provided 280 calories and approximately 25% of the USRDA for most nutrients.

The Geriatric Health Institute, a joint venture between Sioux Valley Hospital and the University of South Dakota School of Medicine (USD SM), has been in existence since 1992. Its interdisciplinary staff of health care professionals include a geriatrician, geriatric clini-

cal nurse specialists, dietitian, pharmacist, social scientist and consultants in social work, occupational, physical and speech therapies. These professionals are experienced in research, education and practice in geriatrics. Investigation of this nutritional issue was an appropriate research topic for the interdisciplinary team.

METHODOLOGY

The purpose of this study was to measure the impact of milk-based nutritional supplements on the overall nutritional status of older adults participating in the Congregate Dining Program. The study's hypothesis was:

Introducing a milk-based nutritional supplement into the diet of elders participating in the Congregate Dining Program (CDP) will significantly influence the nutritional status of those elders over time.

Objectives of the MealMate Project were to:

- 1) assess nutritional status of elders receiving meals through the Congregate Dining Program (CDP)
- 2) increase caloric intake in CDP elders by providing daily "doses" of Carnation Instant Breakfast combined with 1/2 pint of whole milk (milk/CIB) for 4 weeks
- 3) evaluate client satisfaction with the milk/CIB supplement and subject compliance with research protocol, and
- 4) measure and compare the effects of milk/CIB on selected nutritional indicators and overall well-being of elders over 4 weeks.

Relying on established community relationships, researchers contacted the professional staff at the Sioux Falls Bergeland Senior Center in September to secure their cooperation in launching the study. Also, the informal leadership at the center (e.g., the elders themselves) were contacted to introduce the study and obtain their endorsement. In late September 1994, older adults participating in CDP and other activities were approached about enrolling in the MealMate study. A festive, promotional atmosphere was created during this enrollment time, and potential subjects were invited to taste free samples of the supplement (Carnation Instant Breakfast combined with whole milk). The benefits of participating in the study were carefully identified: (a) a free, 28-day supply of nutritional supplements (milk/CIB), (b) free blood tests that could be shared with the individual's physician, (c) a festive mug in which to mix the supplement, (d) an occasion to learn more about their own health and (e) an opportunity to help other persons through the advances in research.

A convenience sample of 64 Ss enrolled in the study after giving informed consent. Because the sample was not randomly selected, the results from the study must be interpreted cautiously. Approximately 11% of the Ss withdrew by study's end.

Appointments were scheduled in early October, and health care professionals and trained students joined together to obtain data from the enrolled subjects. Collected information included:

- Level II Nutrition Screen⁷
- Anthropometric measures such as height, weight, mid-arm circumference, mid-arm muscle circumference, triceps skinfold measures and body mass index
- General psychosocial and demographic information
- Folstein Mini-Mental Status Exam⁸
- Geriatric Depression Scale.⁹

Additionally, 5 laboratory tests from venipuncture blood draws were conducted to investigate the impact of the intervention on protein, calcium and Vitamin D levels:

- Serum albumin - measure of long-term changes in nutritional health (about 21 days)
- Pre-albumin - measure of short-term changes in nutritional health (about 72 hours)
- Calcium - naturally occurring mineral
- Vitamin D - naturally occurring hormone that helps absorb calcium in the gut and
- PTH (parathyroid hormone) - naturally occurring hormone that regulates calcium balance in the body.

The next week (Week 1), Ss came to the CDP site to pick up a week's supply of Carnation Instant Breakfast packets and 7 half-pints of whole milk. Older adults were given instructions on how to (a) mix the Carnation Instant Breakfast and whole milk, (b) drink the supplement daily and (c) use the drink as a **supplement** (instead of a replacement for a meal).

Records of weekly acquisitions and additional distribution information (e.g., preferred flavor, whether the subject was diabetic or enrolled in adult day care, next pick-up date) were maintained. Each subject received a weekly call to assess compliance.

At the conclusion of the four-week period, subjects were again scheduled for an appointment, and post-test data were collected. Upon completion of the data collection, a summary of the study findings and individual blood test results were sent to each subject.

ANALYSIS

Data collected during the pre-tests and post-tests and during the weeks of intervention were entered into the computer using the Statistical Package for the Social Sciences (SPSS6.0). Univariate, bivariate and multivariate analyses were conducted. For comparison of the pre-test and post-test data, a paired t-test design was employed. Statistical significance of findings was determined at the $p = .05$ level of significance. Blood tests were conducted in the University Physicians

Laboratory using standard protocols. (see Appendix B)^{10,11}

FINDINGS

1. DESCRIPTION OF MEALMATE SAMPLE

1A. Demographics (see Table I, Sections 1.1-1.9)

Almost three-quarters of the MealMate sample was female. The average age of Ss was 75 years, with a range from 56 to 94 years. About 4 of 10 had less than a high school education and the same proportion were married. Over 50% reported living alone and 97% were Caucasian.

When asked to rate their own health, about one-quarter reported their health to be "fair" or "poor". MealMate Ss study reported using the CDP from a period of months to 20 years. Almost one-fourth of the Ss were enrolled in the adult day care program at the CDP.

1B. Nutritional Status (see Table I, Sections 1.10-1.26)

Using the Level II Nutrition Screening instrument, a variety of factors determined nutritional risk. Eleven people of 64 people (18%) reported a weight gain or loss of ten pounds within the last 6 months. No subjects admitted to using alcoholic beverages on a regular basis. About 16% described their appetite as "poor", and almost 40% reported eating most of their meals alone. To varying degrees, subjects reported difficulty in chewing or swallowing (10%), bone pain (36%), bone fractures (26%), glossitis (5%) and dry skin (29%).

Questions related to adequate daily ingestion of foods from particular food groups resulted in these percentages of the sample reporting insufficiencies:

- breads, pasta, cereals, rice 5 or fewer times daily (56%)
- vegetables 2 or fewer times daily (39%)
- milk or milk products once or not at all daily (28%)
- fruits, juices once or not at all daily (26%).

Data from the National Health and Nutrition Examination Survey (NHANES) suggest these levels of insufficiencies in the MealMate sample are far less severe than for the rest of the elder American population, where 78% and 71% reported insufficiencies in vegetables and fruits respectively.^{12, 13}

While 28% reported living on incomes of less than \$6,000 per year, only one person reported using food stamps. Almost 5% indicated they did not have enough food to eat each day, and 32% agreed that they preferred not to spend more than \$30/week on food.

Table I Description of MealMate Subjects: Demographic and Nutritional Measures (N = 64)		
Table	Demographics	Categories
1.1	Gender	73% Female
1.2	Age	31% Under 70 Yrs 41% 70-79 Yrs 22% 80-89 Yrs 6% Over 89 Yrs
1.3	Education	42% Less than High School 30% High School Diploma 28% Post High School
1.4	Marital Status	42% Married 13% Divorced 36% Widowed 9% Never Married
1.5	Live Alone	51% Yes
1.6	Race	97% Caucasian 3% Native American
1.7	Self-Rated Health	14% Excellent 59% Good 27% Fair or Poor
1.8	Use of CDP	Range: 4 Mo - 20 Yrs Mean = 7.5 Yrs; SD = 5.6 Yrs
1.9	Adult Day Care	23% Yes
Table	Nutritional Measures	Categories
1.10	Weight Change	18% Yes
1.11	Use Alcohol	0% Yes
1.12	Poor Appetite	16% Yes
1.13	Eat Alone	38% Yes
1.14	Difficulty Chewing/ Swallowing	10% Yes
1.15	Bone Pain	36% Yes
1.16	Bone Fractures	26% Yes
1.17	Glossitis	5% Yes
1.18	Dry Skin	29% Yes
1.19	Inadequate Daily Intake Of: Breads, Past, Cereals, Rice	56 % Yes
1.20	Vegetables	39% Yes
1.21	Milk, Milk Products	28% Yes
1.22	Fruits, Fruit Juices	26% Yes
1.23	Income Under \$6,000/yr	28% Yes
1.24	Use Food Stamps	2% Yes
1.25	Not Enough to Eat Daily	5% Yes
1.26	Not Spend \$30/Wk on Food	32% Yes
1.27	Need ADL Assistance In:	
	Bathing	3% Yes
	Dressing	3% Yes
	Eating	3% Yes
	Grooming	3% Yes
	Toileting	2% Yes
1.28	Need IADL Assistance In:	
	Food Preparation	15% Yes
	Shopping	20% Yes
	Travel	20% Yes
	Walking	7% Yes
1.29	Use Of Local Services:	
	Transportation	22% Yes
	Sr. Companion/Homemaker	12% Yes
	SD (ASA) Social Worker	8% Yes
	VNA/Home-Delivered Meals	6% Yes

1C. Functional Measures (see Table I, Sections 1.27-1.29)

Measurements of Activities of Daily Living (ADLs) and Instrumental Activities of Daily Living (IADLs) were included in the Level II Nutrition Screen. In general, the sample proved to be very independent in ADLs. A greater percentage of Ss reported needing assistance with IADLs, such as food preparation (15%), shopping (20%) and travel (20%).

Table II Pre-Test Indices for MealMate Subjects			
Measure	Range	Mean	Standard Deviation
Mini-Mental Status Exam	0-30	26	5.9
Geriatric Depression Scale	0-10	2.4	2.4
Body Mass Index	17-46	26.55	5.26
Ave. Triceps			
Skinfold (mm)	3-34	12.36	6.9
Mid-Arm Circumference (cm)	21-44	29.2	4.2
Mid-Arm Muscle			
Circumference (cm)	19.12-35.84	25.35	3.4
Blood Tests:			
Serum Albumin	3.269-5.404	4.521	.394
Pre-Albumin	102.1-358.6	201.523	56.053
PTH	11.50-70.57	29.234	12.369
Vitamin D	6.29-43.42	24.920	8.363
Calcium	8.3-10.6	9.642	.404

Subjects were also asked which local services, if any, they used to maintain their independence. The service most utilized was transportation (22%). About 8 people (12%) reported utilizing Senior Companions or homemaker services. To a less degree, other services such as Adult Services social worker intervention, visiting nurse, home-delivered meals or home health care were used.

1D. Medical Information (see Table II)

Assessment of cognitive functioning and depression was done using the Folstein Mini-Mental Status Exam (MMSE) and the Geriatric Depression Scale (GDS) respectively. Standard cutoffs less than 27 (out of 30) for the MMSE and greater than 4 (of 15) for the GDS were used to determine whether Ss in the sample demonstrated cognitive impairment or depression. As a whole, sample scores showed little evidence of cognitive impairment and depression in MealMate subjects.

Anthropometric measures were used as well. The ratio of weight to height was used to compute the Body Mass Index (BMI) for each subject. Three triceps skinfold measures were taken and averaged, and mid-

arm circumference and mid-arm muscle circumference were also calculated. Anthropometric measures by sex and age were compared to tables of normative data. (see Appendix C)¹⁴ This comparison showed that the sample fell exactly within the normative range on healthy nutritional indicators for people by age and gender.

Venipuncture blood samples were taken from each subject. Serum albumin, pre-albumin, PTH, Vitamin D and calcium tests were conducted on the blood samples. Pre-test and post-test lab values for MealMate Ss in Table II are congruent with reported ranges for older adults in midwestern America in the autumn season (particularly for calcium tests). (see Appendix B)

2. MEASURED EFFECTIVENESS OF MILK/CIB ON INDICATORS OF HEALTH

The data were subjected to paired t-test analysis to determine if the means for the variables at the beginning and end of the study were significantly different from each other. A two-tailed test was used to detect a difference in means regardless of the direction of the difference, and a significance level of .05 was used.

2A. Nutritional and Anthropometric Data

Results from the paired t-test analysis showed that several statistically significant differences were present at the conclusion of the study. (see Table III) At the end, Ss had significantly greater mean average triceps skinfold measures, greater mean body mass index (ratio of weight to height), higher weight and lower frequency of Ss' triceps skinfolds below the 10th percentile (based on gender and age). Other indicators showed significant change over time as well. At the end of the study, Ss reported less bone pain and greater tenden-

Table III Comparison of Pre-Test and Post-Test Sample Means Using Paired t-test Analysis							
PAIR	Pre-Test Mean	Post-Test Mean	Diff Mean [^]	Std Error	T-Value	D.F.	2-tail Prob*
Ave. Triceps							
Skinfold	12.3158	14.0877	1.77	.593	2.99	56	.004*
Body Mass Index	27.0536	27.6250	.57	.244	2.34	55	.023
Weight	157.357	158.321	.96	.394	2.45	55	.018*
<10%ile for Triceps Skinfold	1.4386	1.6316	.19	.073	2.65	56	.010*
Bone Pain (1=Yes)	1.614	1.772	.16	.078	2.02	56	.049*
Spend <\$30/Wk on Food (1=Yes)	1.6604	1.9057	.24	.07	3.46	52	.001*
Serum Albumin	4.5175	4.3977	-.12	.032	-3.77	56	.001*
Pre-Albumin	199.8579	199.0860	-.77	7.394	-.10	56	.917
PTH	29.7535	31.3058	1.55	1.29	1.2	56	.234
Vitamin D	25.272	25.924	.65	.512	1.27	55	.208
Calcium	9.661	9.657	-.004	.056	-.06	55	.949

* Statistical Level of Significance of p < .05
[^]Minus (-) represents decrease in mean value over time

cies to spend money on food. These relationships were significant at the $p = .05$ level of significance. Participation in the study did improve older adults' nutritional status, as indicated by triceps skinfold measurement. Weight gain was anticipated since the caloric content of the milk/CIB supplement over 28 days was equivalent to approximately 2.24 pounds of weight gain, presuming that other factors in an older person's diet and lifestyle remained constant. Satisfaction with the taste and use of milk/CIB and the perceived consequences to their health seemed linked to Ss reports of less bone pain, and greater tendency to spend money on food.

2B. Laboratory Data

Using identical procedures to test for significance, paired t-tests were conducted on the 5 blood tests. Results of the paired t-tests showed no significant differences in pre-test and post-test blood tests, with the exception of serum albumin; levels of serum albumin

fell over time, contrary to predicted changes of improvement. (see Table IV)

Additional analyses were conducted to determine if there might be changes in levels of protein, calcium and Vitamin D over time for different age groups. Using the age categories defined for anthropometric scales, paired t-test analyses were run again. Declines in serum albumin over time remained statistically significant. Interestingly, among older cohorts of subjects (80-89 years and over age 90), improved levels of Vitamin D over time were also statistically significant.

3. RESEARCH COMPLIANCE

Daily phone contact was initiated with a subset of Ss to assess compliance with the research protocol throughout each week. (see Table V, Section 5.1-5.5) The approach used in these telephone contacts was one of friendly, genuine interest. Averaging the calling periods, about 99% of Ss were successfully contacted. On average, 91% reported taking the milk/CIB supplement the previous day (an initial compliance rate of 84% eventually increasing to 92% by study's end). According to the telephone survey, 90% of Ss indicated they always took the milk/CIB supplement as a snack instead of a meal, a rate higher than that reported on the post-test instruments (76%). The taste of milk/CIB was rated very favorably, with an average of 96% of the weekly samples rating the taste as "good" or "excellent". About 98% of Ss rated participation in the study as "easy" or "very easy". Favorability seemed to improve (rather than decline) as the study proceeded.

Open-ended comments were also recorded from the telephone conversations. The following statements are excerpts from telephone conversations:

It's delicious!...I have trouble finding the right time (in the day) to take it (milk/CIB)...I drink it with my meal to take my pills...Sometimes I drink half in the morning, half in the afternoon...I could drink this 2 or 3 times a day!...I forgot one day — if my routine is disturbed, it's easy to forget...I love the taste!...It's been a great benefit...I think it (milk/CIB) has really made me constipated...Milk usually makes me sick, but apparently the CIB has made it possible for me to drink milk...I don't think this has made much of a difference, but I can't expect much — I'm 81...

Table IV
Pre-Test and Post-Test Means for Blood Tests
and Levels of Significance, Controlling for Age

Blood Test	Pre-Test Mean	Post-Test Mean	Diff	2-tail Sig.
All Ages				$p < .05$
Serum Albumin	4.5175	4.3977	-.1199	>.001*
Pre-Albumin	199.8579	199.0860	-.7719	.917
PTH	29.7535	31.3058	1.5523	.234
Vitamin D	25.2719	25.9243	.6524	.208
Calcium	9.6607	9.6571	-.0036	.949
Cohort under age 70				
Serum Albumin	4.6121	4.5411	-.0709	.273
Pre-Albumin	213.5222	197.2389	-16.2833	.263
PTH	29.3911	33.8250	4.4339	.172
Vitamin D	27.3041	25.5365	-1.7676	.020*
Calcium	9.7000	9.6000	-.1000	.415
Cohort 70-79 Years				
Serum Albumin	4.5190	4.4194	-.0996	.060
Pre-Albumin	188.7391	193.1478	4.4087	.671
PTH	28.9817	28.9174	-.0643	.969
Vitamin D	25.0765	25.6804	.6039	.445
Calcium	9.7087	9.7870	.0783	.337
Cohort 80-89 Years				
Serum Albumin	4.3760	4.1718	-.2042	.005*
Pre-Albumin	204.5250	215.6250	11.1000	.573
PTH	34.9458	35.7817	.8358	.734
Vitamin D	22.7108	26.0793	3.3686	.010*
Calcium	9.5500	9.5500	.0000	1.000
Cohort over age 89				
Serum Albumin	4.5082	4.3045	-.2037	.127
Pre-Albumin	188.3000	191.9250	3.6250	.880
PTH	20.2450	20.2750	.0300	.988
Vitamin D	25.4425	28.5100	3.0675	.027*
Calcium	9.5500	9.4750	-.0750	.744

Table V
Results from Telephone Contacts to
MealMate Subjects

		Call 1	Call 2	Call 3	Call 4	Average C ₁ - C ₄
	Number of Subjects	63	60	54	39	54
5.1	Reached by Telephone	100%	98.3%	98.1%	100%	99.1%
5.2	Took Milk/CIB Yesterday	84.1%	95.0%	94.4%	92.1%	91.4%
5.3	Took Milk/CIB as Snack	80.0%	93.2%	94.3%	94.6%	90.5%
5.4	Rated Taste of Milk/CIB as "Good" or "Excellent"	90.9%	100%	95.2%	100%	96.5%
5.5	Rated Participation as "Easy" or "Very Easy"	93.3%	100%	97.5%	100%	97.7%

Overall, about half (53%) of the Ss reported a perfect "no miss" compliance rate. (see Table VI, Sections 6.1-6.15) Reports of missing one day or two days of the supplement were reported by 16% and 14% of the sample respectively. About 8% reported missing 5 to 9 days of supplement during the 4-week study.

The research protocol over the 4 weeks required each subject to drink a daily mixture of a half-pint of whole milk combined with Carnation Instant Breakfast (milk/CIB) in addition to their regular diet (i.e., consume the supplement at non-meal times). When subjects were questioned at the conclusion of the study about their usage, less than one-quarter (18%) reported using milk/CIB as a meal (most often breakfast), a pattern contradictory to the intent of the study. For those complying with the protocol of ingesting the supplement at non-meal times, most reported using the milk/CIB at varied times during the day—sometimes at mid-morning, mid-afternoon or evening. Others failed to comply with the research protocol by substituting a milk of lower fat content (17%), using ice cream (8%) or sharing the supplement with another person (8%).

4. RESPONSE TO DIETARY PRODUCTS (see Table VI, Sections 6.1-6.10)

Since Carnation Instant Breakfast comes in three flavors (strawberry, vanilla, or chocolate), Ss were given the choice of flavors over the course of the 4 weeks. About half of the subjects (55%) chose a variety of flavors. Of those tasting a variety of flavors, 50%

preferred strawberry over other flavors, 20% preferred chocolate, and 15% chose vanilla or had no preference.

Participants were asked what type of milk they normally drank prior to the study. Almost half reported using skim or 1% milk. About a third used 2% milk, and almost 11% used whole milk. One person indicated he/she did not drink milk at all. Upon completion of the study, participants were asked whether they thought having whole milk was acceptable. Seven of 10 older adults were comfortable with having whole milk added to their diet in the form of the milk/CIB supplement. For those who were not comfortable with whole milk, 8 of 10 referenced the fat content, indicating a preference for a less caloric milk alternative; 13% said they did not like the taste of whole milk and 7% reported physical discomfort from drinking whole milk.

At the end of the study, Ss were asked about their intentions to continue portions of the intervention. Specifically, they were asked about whether they would persist in using whole milk in their regular diet and whether they planned to purchase Carnation Instant Breakfast (CIB). About one-quarter said they planned to buy whole milk and half indicated an interest in purchasing CIB when the study was concluded.

5. ATTITUDES TOWARD THE STUDY PROTOCOL (see Table VI, Sections 6.11-6.15)

Receptivity to the research protocol was evaluated through a series of open-ended questions. Subjects were asked to report changes in sense of well-being, what they enjoyed about their participation, difficulties they encountered, and suggestion for improvement.

At the close of the study, 30% of MealMate Ss reported changes in how they felt. For that group, more than half indicated they felt better and had more energy. About one-fourth described a change in weight (mostly weight gain), and 12% expressed new difficulties with constipation.

In response to what they enjoyed about the study, over half of the participants indicated they liked the taste of the supplement. About a quarter said that the study was "fun". Other comments referred to humanitarian contributions to learning (8%), working with nice people (5%), having a good snack (3%), drinking more milk (5%) and having access to results from the blood tests (2%).

Aspects of the study described as difficult are shown in Table VI Section 6.14. Three of 10 people reported problems with constipation or gas from taking the supplement. Others referenced distribution procedures

(18%), remembering (12%), monotony (12%), difficulty mixing the supplement (12%) and not understanding the purpose of the study (5%). Using the supplement was difficult for some because it felt like eating an extra meal (6%) or was too much to drink at one time (6%).

Table VI Section 6.15 highlights suggestions to improve the research protocol. About one-third were content with the study design and had no recommendations for improvement. One-third of Ss suggested using milk of a lower fat content. A few Ss suggested eliminating the phlebotomy work, explaining the purpose of the study more thoroughly, or distributing the weekly supplement earlier in the day to avoid a rush at the noon congregate dining meal.

6. COMPARISON OF GROUPS PERSISTING IN AND WITHDRAWING FROM STUDY

Since an attrition rate of approximately 11% of the initial sample was experienced during the 4-week study, a comparison of those who did and did not complete the study was conducted using pre-test data. (see Table VII) Crosstabulations were used to investigate whether certain factors might have a significant influence on a subject's persistence in the study. Analysis of most variables showed that differences between the groups were not statistically significant. Those that persisted and those who did not were very similar. However, a few variables did demonstrate significant differences between the two groups. Those who withdrew were more apt to have problems chewing, a lower body mass index, and a lower mid-arm muscle circumference. Other variables approaching significance included bone pain (less among those who withdrew) and self-ratings of health ("excellent" or "good" among those not persisting).

DISCUSSION

Conducting this longitudinal nutrition study has yielded new information. First, the study permitted the assessment of nutritional status of elders receiving meals through the congregate dining program in Sioux Falls. Additional descriptive information about the participants was also acquired. Older adults participating in the MealMate study proved to be nutritionally healthy, as demonstrated by various nutrition and anthropometric measures. The study sample proved to be within normal limits on various laboratory measures of protein, calcium and Vitamin D.

Second, improved intake in calories and levels of protein, vitamins and minerals was

Table VI
Percentage of Subjects
Evaluating Product Satisfaction and Research Participation
At Close of MealMate Study (N = 57)

Table	Variable	Categories
6.1	Numbers of Days Missed	53% No Days Missed 16% 1 Day Missed 14% 2 Days Missed 9% 3 Days Missed 8% 5-7 Days Missed
6.2	Used for Which Meal	82% No Meal 12% Breakfast 4% Lunch 2% Dinner/Supper
6.3	Time of Day Milk/CIB Used	20% Mid-Morning 27% Mid-Afternoon 15% Evening 38% Varied Times
6.4	Flavor CIB Chosen	55% Variety 22% Chocolate 14% Vanilla 9% Strawberry
6.5	Flavor CIB Preferred	50% Strawberry 20% Chocolate 15% Vanilla 15% No Preference
6.6	Milk Usually Drunk	49% Skim/One Percent 31% Two Percent 11% Whole Milk 7% Other 2% No Milk
6.7	Whole Milk OK?	69% Yes
6.8	Why Whole Milk Not OK	80% Prefer Less Calories/Fat 13% Dislike Taste 7% Discomfort
6.9	Plan to Buy Whole Milk	22.2% Yes
6.10	Plan to Buy CIB	49.1% Yes
6.11	Feel Differently After MealMate	29% Yes
6.12	Cited Changed After Study	50% Feel Better/Energized 25% Weight Change 12% Constipated 13% Other
6.13	Enjoyed Aspects of MealMate	55% Like Flavor 22% Fun 8% Humanitarian 8% More Milk/Good Snack 5% Nice People 2% Blood Test Results
6.14	Difficult Aspects of MealMate	29% Gas/Constipation 18% Distribution 12% Remembering 12% Too Much to Drink 12% Monotony 12% Hard to Mix 5% Purpose of Study Unclear
6.15	Suggestions to Improve Study	33% Fine as Is 33% Reduce Fat 17% Eliminate Blood Work 8% Clearer Explanation of Purpose 8% Alter Distribution Process

Table VII
Statistically Significant Relationships Between
Select Independent Variables and Attrition in the
MealMate Study

Independent Variable	Statistic	Significance Level
Problem Chewing (1 = Yes)	$U_{yx} = .11$.02*
Low Body Mass Index (1 = Yes)	$U_{yx} = .08$.04*
Mid-Arm Muscle Circumference (1 = Low)	$U_{yx} = .39$.001*
Bone Pain (1 = Yes)	$U_{yx} = .13$.08
Self-Rate Health (1 = Excellent)	$U_{yx} = .16$.08
KEY:		
U_{yx}	Uncertainty Coefficient is a normed, asymmetric nominal measure of association that uses information about the whole distribution of the dependent variable (not just the modal category) in reducing uncertainty and classifying cases correctly. ¹⁵	
*	Significance at $p < .05$ using Pearson's Chi-Square of Significance	
Attrition	Dependent Variable (1 = Yes, Withdrew).	

demonstrated during the 4-week study. Post-test measures of weight demonstrated that Ss had improved nutritional health and had gained approximately the predicted amount associated with a 28-day supply of milk/CIB (2.24 pounds).

Third, data collected on compliance and subjects' assessment of the research protocol suggest that elders were willing to invest in a longitudinal research project with potentially desirable benefits to them and to others. Less than 11% of Ss withdrew from the study, and about half reported a perfect "no miss" compliance rate. Much was learned about conducting a study of older adults in a community-based setting, particularly the importance of weekly telephone contacts to assess compliance and establish rapport with Ss. Data reported on product satisfaction indicated that most Ss were comfortable with using whole milk in their diets and Carnation Instant Breakfast was perceived to be a favorable, tasty supplement.

Fourth, paired t-test analyses demonstrated that the milk/CIB intervention did have a positive effect on selected nutritional indicators in elders over 4 weeks. Increased weight and average triceps skinfold measures, improved attitudes toward purchasing food and reports of feeling better are examples of significant changes over time. While many of the laboratory tests did not significantly corroborate these findings, some interpretations might offer explanations and considerations for future research.

The significant drop in serum albumin was unexpected in light of the above and may be due to a change (i.e., increase) in blood volume. If Ss hydration status

improved over the course of the study, this could explain the decline in measurable serum albumin, masking the true effect of the supplement on nutritional status. An important point to note in this discussion is that the pre-test and post-test results for serum albumin (and for other laboratory tests) were within clinically normal ranges. Thus, while there were statistically significant changes over time, these changes would have little clinical relevance on the nutritional status of the elder.

Another explanation of the counter finding (i.e., serum albumin decreasing over time) rests in the fact that this test for blood protein takes many weeks to change significantly. Moreover, observed changes may be due to other interventions. Both of these explanations signal the importance of (a) introducing a nutritional supplement into the diets of elders for a longer period of time and (b) introducing a control group into the study protocol.

While the literature identifies health risks in nutritionally compromised older adults, the congregate dining program population may be atypical (i.e., excellent nutritional health). The daily provision of a well-balanced meal, regular outings, and socialization may be significant interventions in people's health. Although inferring a causative relationship is beyond the scope of this study, use of such a federal program for good nutrition and socialization appears to be beneficial to older adults. To determine from a research perspective whether the milk/CIB supplement is successful in improving nutritional health and well-being, a less healthy sample may be needed. It may be more likely to find those adults in other settings (home-bound elders or those using home-delivered meals) where malnourishment and related health risks may be more prevalent. Future research should also utilize a larger, random sample.

Improved Vitamin D levels in elders over age 80 is an important finding from MealMate. This group, composed primarily of older women, also reported significant declines in bone pain, a possible symptom of osteoporosis. Further, as a group, these elders may be more vulnerable to Vitamin D malnutrition due to (a) decreased dairy product use, (b) limited access to Vitamin D through exposure to sunshine and (c) higher USRDA allowances needed for calcium for adults over age 65. Use of whole milk alone (originally as a portion of the dietary supplement) might successfully accomplish the goal of improved nutritional status in elders over age 70.

CONCLUSION

The MealMate study proved to be an effective strategy in improving nutritional health in older, community-dwelling adults. While the subjects proved to be very healthy at the onset of the study, the study did show that use of the supplement over 28 days could improve people's nutritional health. Many felt better and had physical measures showing improved nutri-

tional status. Adding a supplement to elders' diets may be an easy, yet effective, way to improve health, especially in nutritionally at-risk elders over age 80.

Recommendations for future research include (a) instituting a control group, (b) identifying a more nutritionally at-risk population, (c) lengthening the duration of the study, (d) persisting with methods to insure subject compliance, (e) focusing on measures related to whole milk and Vitamin D and (f) targeting elders over age 80 who might most benefit from efforts to improve nutritional status over time.

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APPENDIX A: NUTRITIONAL CONTENT OF CARNATION INSTANT BREAKFAST COMBINED WITH MILK

	Per Envelope	8 oz Whole Milk	1 Envelope w/Whole
Calories	130	150	280
Protein	4 grams	8 grams	12 grams
Carbohydrate	29 grams	11 grams	40 grams
Fat	0 grams	8 grams	8 grams
Sodium	160 mg	120 mg	280 mg
Potassium	220 mg	370 mg	590 mg

Percentage of the U.S. Recommended Daily Allowance (USRDA)

	Per Envelope	8 oz Whole Milk	1 Envelope w/Whole
Protein	8%	20%	28%
Vitamin A	35%	4%	39%
Vitamin C	45%	4%	49%
Thiamine	20%	6%	26%
Riboflavin	8%	25%	33%
Niacin	25%	*	25%
Calcium	10%	30%	40%
Iron	25%	*	25%
Vitamin D	0%	25%	25%
Vitamin E	25%	0%	25%
Vitamin B6	20%	4%	24%
Folic Acid	25%	0%	24%
Vitamin B12	10%	15%	25%
Phosphorus	10%	20%	30%
Iodine	2%	30%	32%
Magnesium	20%	8%	28%
Zinc	20%	4%	24%
Copper	25%	0%	25%
Pantothenic Acid	20%	6%	26%

APPENDIX B

Materials & Methods Used in Blood Analysis

Serum Albumin

Serum albumin was determined by albumin binding dye, bromocresol purple (BCP)¹⁰ (Sigma Chemicals, St. Louis, MO). Briefly, to 10 μ l of human albumin standards and unknowns, 1 ml of BCP dye reagent was added and absorbance was measured at 600 nm. Albumin concentration of were determined from the generated albumin standard curve.

Pre-Albumin

Serum pre-albumin was determined by immunoprecipitin analysis (INCSTAR, Stillwater, MN).¹¹ Briefly, 9 μ l of pre-albumin standards and serum samples are mixed with 700 μ l of polymer diluent. Following an initial incubation, the absorbance of each sample measured at 340 nm. To each sample 30 μ l of antiserum specific for pre-albumin is added and incubated for eight minutes. The final absorbance is measured and subtracted from the initial (background) absorbance. Using the standards, the concentrations of pre-albumin in serum are determined.

PTH

Serum intact parathyroid hormone (PTH) was determined by immunoradiometric assay (IRMA) kit (INCSTAR). Briefly, 200 μ l of sample was transferred into borosilicate glass tubes. To each tube 100 μ l of iodinated goat antibody specific to 1-34 sequence of PTH was dispensed. Finally a single polystyrene bead coated with goat antibody specific to 39-84 sequence of PTH was dropped into each tube. Following a 22-hour incubation (22° C), the content of the tubes are aspirated and washed with buffer three times and radioactivity was determined.

Vitamin D

The serum 25 hydroxyvitamine D (25-OHD) were determined by radioimmunoassay (RIA) kits purchased from INCSTAR. Briefly, 50 μ l of serum was extracted with 500 μ l of acetonitrile and then quickly mixed and centrifuged. Fifty μ l of the supernatant was analyzed in duplicates. The antibody bound 25-OHD, was precipitated and the radioactivity was determined. The concentrations of 25-OHD was determined from the standard curve generated by the four parameter fit method.

Calcium

Serum calcium concentrations were determined by Kodak Ectachem DT60 analyzer. After calibration, 10 μ l of serum was placed on the calcium slide, where calcium interacts with an indicator dye (Arsenazo iii) to form a colored complex. The density of the developed color, which is dependent on calcium concentration, is determined by reflectance spectrophotometry.

Reported Normal Ranges for Blood Tests

Normal range of pre-albumin: 160-400 mg/ml

Normal range of fasted serum intact PTH: 13-53 pg/ml

in hyperparathyroid patients: 43.6-6.686.1 pg/ml

in patients with renal disease: 10.3-1042 pg/ml

Normal range of 25-D3 in United States is: 22.3 \pm 8.2 to 31.3 \pm 3.0 ng/ml

in Europe (Sept): 36.2 \pm 9.2 ng/ml

Pre-Test and Post-Test Ranges* in Lab Values for Meal/Mate Subjects

	Albumin	Pre-Albumin	PTH	Vitamin D	Calcium
Pre-Test	4.1272- 4.9142	145.467- 257.573	16.865- 41.603	16.5577- 33.2829	9.2378- 10.0456
Post-Test	3.9781- 4.8173	158.808- 239.364	13.938- 48.674	16.9718- 34.8768	9.1909- 10.1234

Note: Range equals the sample mean \pm 1 standard deviation for blood test. Range was determined by computations completed in the USDSM Internal Medicine Laboratory.

Appendix C

Normative Tables for Selected Anthropometric Measures by Age and Gender

Sex and Age (y) No. in Group	Sample	Mean	5th	10th	25th	50th	75th	90th	95th
Triceps skinfold thickness									
mm									
<i>Women</i>									
60-89	496	25.2	12.5	14.4	18.5	24.0	30.8	38.1	43.6
60-69	146	27.2±10.2	13.0	14.7	20.7	26.2	33.0	40.3	47.2
70-79	239	25.1±9.3	13.0	15.0	18.0	23.7	31.0	38.3	41.5
80-89	111	23.3±9.7	10.9	12.9	16.7	21.8	27.5	34.6	43.4
<i>Men</i>									
60-89	250	22.5	5.7	7.6	11.5	20.4	31.8	42.1	45.8
60-69	86	21.9±13.6	4.9	6.9	10.8	18.0	31.9	45.1	49.3
70-79	115	23.5±13.3	6.3	7.9	12.0	22.0	32.7	41.8	45.4
80-89	49	21.6±11.0	5.8	8.0	11.5	21.0	29.6	37.5	40.5
Mid-Upper-Arm Circumference									
cm									
<i>Women</i>									
60-89	496	30.0	23.3	25.1	27.0	29.7	32.7	35.9	38.1
60-69	146	31.1±4.8	23.5	25.6	27.7	30.6	33.7	37.5	39.9
70-79	239	30.0±4.1	23.5	25.5	27.1	29.5	32.5	35.5	37.8
80-89	111	28.8±4.6	22.5	23.5	26.0	28.8	31.6	34.5	36.4
<i>Men</i>									
60-89	250	30.4	24.9	26.6	28.7	30.4	32.2	34.6	36.3
60-69	86	30.5±3.0	25.1	27.3	29.0	30.5	32.4	34.2	35.7
70-79	115	30.7±3.1	25.3	26.8	29.0	30.7	32.4	34.6	36.6
80-89	49	29.6±3.5	23.4	24.9	27.6	29.6	31.5	35.3	36.5
Mid-Upper-Arm Muscle Circumference									
cm									
<i>Women</i>									
60-89	496	22.0	16.7	17.7	19.8	21.9	24.3	26.9	28.3
60-69	146	22.6±3.6	17.8	18.4	20.2	22.3	24.6	27.5	29.2
70-79	239	22.1±3.5	16.7	17.8	19.8	21.9	24.2	26.7	28.2
80-89	111	21.4±4.1	15.2	16.7	19.1	21.3	24.2	26.7	27.5
<i>Men</i>									
60-89	250	23.3	16.6	18.1	20.5	23.4	26.2	28.4	29.7
60-69	86	23.7±4.4	16.1	18.0	20.5	23.7	26.7	28.9	31.7
70-79	115	23.3±4.1	17.0	18.2	20.4	23.4	26.3	28.4	28.7
80-89	49	22.8±3.3	16.6	18.2	20.7	22.8	24.9	27.3	28.6

SOURCE: Chernoff, R (ed.). 1991. Chapter 14 by C.O. Mitchell & R. Chernoff, page 382.

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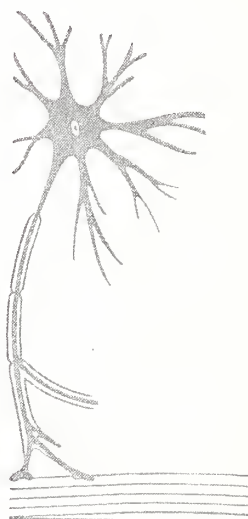
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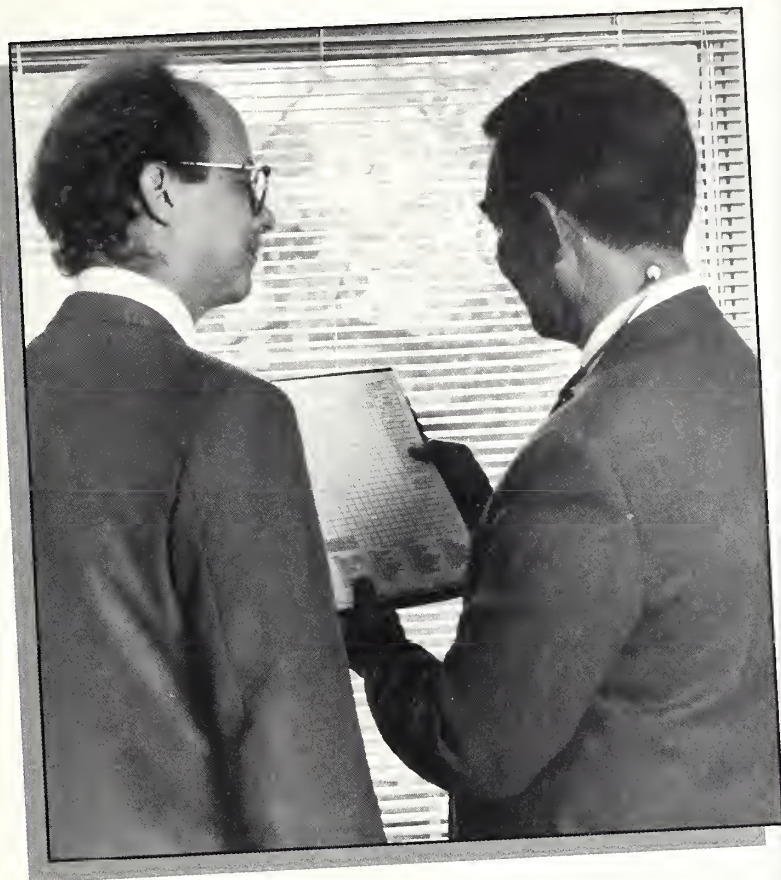
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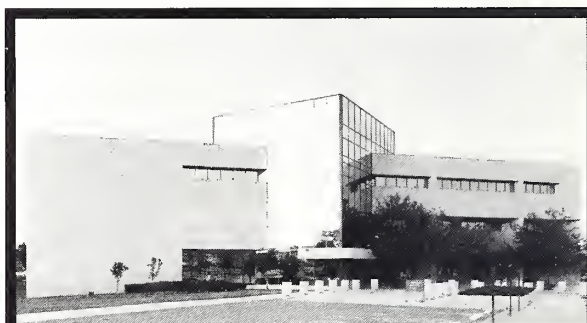
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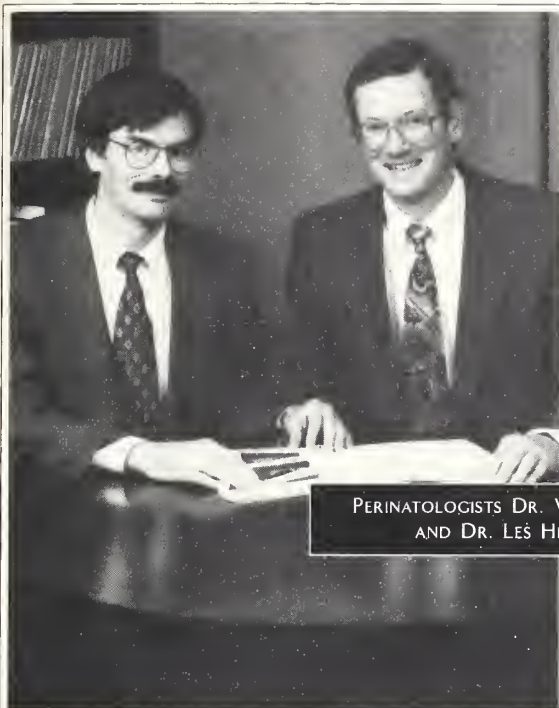
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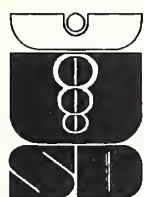
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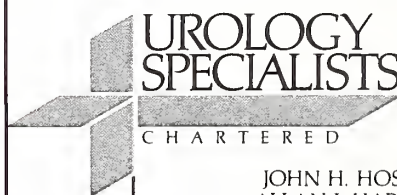
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A New Class of Antihypertensive: Angiotensin II Receptor Antagonists

Randy McCoy, Pharm.D, Sioux Falls, SD

Physiology of the RAS

The renin-angiotensin system (RAS) is diverse and involves many physiologic and pathophysiologic mechanisms. In the kidney the RAS modulates renal blood flow, glomerular filtration rate, and sodium resorption. In blood vessels the RAS modulates vascular tone and is involved in intimal proliferation and hypertrophy. The RAS has inotropic, metabolic, and hypertrophic activities in the myocardium. In addition, the tissue RAS has activity on aldosterone secretion from the adrenal gland and, in part, controls thirst, behavior, blood pressure, vasopressin release, and catecholamine release in the central nervous system. Angiotensin II is a potent vasoconstrictor, thus making it a logical target for manipulation in antihypertensive and CHF treatment.

Pathophysiologic Contributions of the RAS

The RAS contributes to the pathophysiology of hypertension, congestive heart failure (CHF), renal dysfunction and likely plays yet unknown roles in other disease states. The pathophysiologic role of the RAS in hypertension is mediated through its intense vasoconstrictive properties but is augmented by its sodium resorptive and vascular hypertrophic properties. In patients with CHF the RAS contributes to the compensatory overshoot seen in mildly to severely decompensated patients. In CHF the RAS becomes "revved up" and facilitates the hyper-adrenergic state, increased vascular tone, coronary artery vasoconstriction, ventricular remodeling and fluid retention.

Therapeutic Implications

Angiotensin converting enzyme (ACE) inhibitors incompletely inhibit the conversion of angiotensin I to angiotensin II. Patients receiving ACE inhibitors initially experience a decrease in circulating angiotensin II levels but a significant rebound effect is often observed. The rebound increase in angiotensin level supports the theory that alternate pathways, other than ACE, exists that convert angiotensin I to II.

In an attempt to more effectively inhibit effects of the RAS, an angiotensin II receptor antagonist has been developed and is available. In April of 1995, losartan (Cozaar®) from Merck became the first angiotensin II receptor antagonist to arrive on the market. Losartan is indicated for the treatment of hypertension alone or in combination with other antihypertensive agents. The usual starting dose is 50 mg once daily. With intravas-

cular depletion or hepatic impairment it is 25 mg once daily. The dosing range is 25 to 100 mg daily. If inadequate blood pressure control is obtained with once daily dosing losartan can be administered twice daily. No dose adjustment is necessary with renal impairment or dialysis. Losartan is well tolerated with chronic administration. Only rare gastrointestinal upset, muscle aches, dizziness, and nasal congestion occurs with the drug. Female patients of child-bearing potential should be cautioned about the potential for serious adverse effects associated with inhibition of the RAS in the second and third trimester of pregnancy. Interestingly, losartan does not cause a cough as do the ACE inhibitors because its administration does not cause accumulation of bradykinins. Thus, losartan may be a reasonable alternative for patients who respond well to ACE inhibitors but do not tolerate them well due to the cough. Losartan has been extensively studied in the treatment of hypertension and is as effective as ACE inhibitors at decreasing blood pressure. Longitudinal studies have not been completed to prove its usefulness in decreasing morbidity and mortality in this patient population. The cost to the patient for one month of losartan (Cozaar®) is approximately \$30 which is slightly higher than the ACE inhibitor lisinopril, which costs approximately \$26 per month.

Future Direction

Although ACE inhibitors have proven to be most effective at decreasing mortality in CHF, they incompletely inhibit the conversion of angiotensin I to II due to alternate pathways. Similar to β -adrenergic receptors, there are two subtypes of angiotensin II receptors, AT₁ and AT₂ subtypes. Losartan inhibits the final common pathway of angiotensin II at one subtype of angiotensin II receptor (AT₁-receptor, which is responsible for the majority of the aforementioned activities of angiotensin II) but, has very little affinity for the AT₂-receptor, of which the physiologic and pathophysiologic roles are unknown. Clinical trials have not been completed to evaluate the safety and efficacy of losartan in CHF but, it is possible that this class of drugs may become very important in the treatment and prevention of CHF. Likewise, the concomitant use of ACE inhibitors and angiotensin II receptor antagonists may be a useful combination to completely inhibit activities of angiotensin II. This war-

rants further investigation. Similarly, selective AT₂ receptor inhibitors may provide another treatment modality for hypertension and congestive heart failure.

Suggested Reading

Pieter BMW, et al: Angiotensin II receptors and angiotensin II receptor antagonists. *Pharm Rev* 1993;45(2):205-251.

Kang PM, Landay AJ, Eberhardt RT, Frishman WH: Angiotensin II receptor antagonists: A new approach to blockade of the renin-angiotensin system. *Am Heart J* 1994;127:1388-1401.

Foote EF, Halstenson CE: New therapeutic agents in the management of hypertension: Angiotensin II-receptor antagonists and renin inhibitors. *Ann Pharm* 1993;27:1495-1503.



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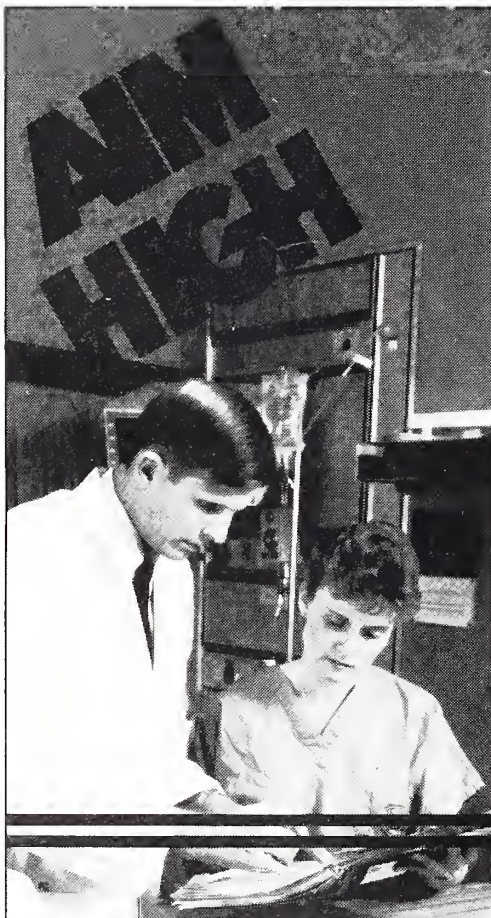


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D At The Foot Of Your Bed

*I stand at the foot of your bed
Buffeted by the hot summer storm
Of your straining, heaving body.*

DR

*We try to cool your brow;
It will not give up its fire.*

R

*Every woman ever labored,
Every man ever born,
Stand here
Straining, too.*

Student

*I stand at the foot of your bed.
You thrust your little one
Into my trembling,
Guiding hands.*

Resident

*Wise one, so new,
Returns from the infinite*

*Neither gown, nor mask, nor glove
Stops this communion.*

I bow at the foot of your bed.

Karen Lauer-Silva, MS 4
for H. T. Gilmore, MD, my attending
in obstetrics

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South Dakota Perinatal Association
Conference**

October 9-10, 1995
Ramkota Inn, Sioux Falls, SD

Guest faculty include: Stanley Graven, MD, University of South Florida; Harold Margolis, MD, Centers for Disease Control; Edward Donovan, MD, University of Cincinnati and Phillip Heine, MD, University of Pittsburgh. CME credits for physicians and nurses will be available. For further information contact:

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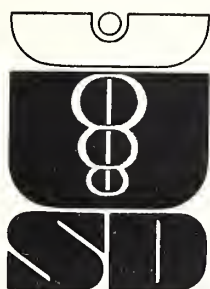
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Program Schedule

0700 MT/0800 CT

3rd Thursday of each month

September 28, 1995 - 0700 MDT/0800 CDT - "How to get the most out of your medical director" by David Brechtelsbauer, MD, Associate Professor, USD School of Medicine. September's program will be on the 4th Thursday to coincide with the SD Medical Director's meeting in Sioux Falls.

October 19, 1995 - 0700 MDT/0800 CDT - "Geriatric Dermatology" by Roger Knutson, West River Dermatology Clinic.

Education credits will be given to MDs, Nursing, Nursing Home Administrators, Social Workers, American Academy of Family Practice, Pharmacists, Dietitians, and others. No preregistration is necessary.

These programs will be broadcast on the Rural Development Telecommunications Network. The RDTN sites are *Aberdeen* - Northern State University; *Brookings* - South Dakota State University; *Huron* - Huron University; *Madison* - Dakota State University; *Mitchell* - Mitchell Technical Institute; *Pierre* - State Capitol Building; *Rapid City* - Rapid City Regional Hospital; *Sioux Falls* - Sioux Valley Hospital; *Spearfish* - Black Hills State University; *Vermillion*, University of South Dakota; *Watertown* - Lake Area Technical Institute; *Yankton* - Human Services Center.

These programs will no longer be broadcast to the 37 satellite sites throughout South Dakota due to scheduling conflict. Video tapes of the programs will still be available at no charge upon request. Please contact Jane Yarbrough, Geriatric Program Coordinator at 605-394-6927 for more information or for tape requests.

South Dakota Rural Outreach Grant #93-912

CME Conferences

CME Conferences being held on a regular basis at various health care facilities throughout the state of South Dakota.
(1 hour AMA Category credit available unless otherwise specified)

CME CONFERENCES

SEPTEMBER 1995

- September 15 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- September 15 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- September 19 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- September 20 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Clinical Pathology Conference, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- September 20 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, to be announced, to be announced, Info: David Rossing, MD 331-3490.
- September 21 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- September 21 **Neuroscience Grand Rounds** - 8:00 am, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- September 21 **Cath Conference** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Alice Glirbas - 333-2766.
- September 21 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- September 22 **Tumor Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351, Ext. 313.
- September 22 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- September 25 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- September 27 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: Willa Hsueh, MD, Topic: Challenge in Clinical Practice: Changing the Natural History of Coronary Artery Disease, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- September 27 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- September 28 **Geriatric Forum** - 7:00 am, RDT Network Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- September 28 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- September 28 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- September 28 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- September 28 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- September 29 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.

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- October 4 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: Fredrick Ahmann, MD, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- October 4 **Topics in Clinical Medicine - Audio Teleconference Series** - 12:30 pm CDT/CT--repeated 12:30 pm MDT/MT; Speaker: Topic: Info: Tom Anowski, USDSM - 357-1480..
- October 5 **Biomedical Ethics** - East Auditorium, Rapid City Regional Hospital, Info: Medical Staff Office - 341-8705.
- October 5 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- October 5 **Clinical Pathology Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: to be announced, Topic: to be announced, Info: Dr's J. Ruggles & R. Thompson, 665-9002.
- October 5 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- October 5 **West River Internal Medicine Grand Rounds** - 2:00 pm, Hot Springs VA Hospital, Speaker: Dr. Alan Morris, Topic: Rheumatology, Info: Dr. Donald Humphreys - 357-1340 (Kris Karbo).
- October 5 **Cath Conference** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Alice Glirbas - 333-2766.
- October 6 **West River Internal Medicine Grand Rounds** - 12:00 noon, Fort Meade VA Hospital, Speaker: Dr. Alan Morris, Topic: Rheumatology, Info: Dr. Donald Humphreys - 357-1340 (Kris Karbo).
- October 6 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.

- October 6 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- October 9 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- October 10 **Breast Cancer Conference** - 12:00 noon, Meeting Room B, Sioux Valley Hospital, Info: Dr. Thomas Cink - 333-5244.
- October 11 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- October 11 **Topics in Clinical Medicine - Audio Teleconference Series;** - 12:30 pm CDT/CT--repeated 12:30 pm MDT/MT; Speaker:Topic: Info: Tom Anowski, USDSM - 357-1480.
- October 11 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: Jeffery Boone, Topic: Preventive & Stress Medicine, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- October 11 **CPR Certification/Recertification** - 7-10:00 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351, Ext. 313.
- October 12 **Internal Medicine, Tumor Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: To be announced, Topic: To be announced, Info: Dr. J. Ruggles & Dr. R. Thompson, 665-9002.
- October 12 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- October 12 **Cardiac Cath Conference** - 7:30 a.m., McKennan Hospital Auditorium, Info: Cardiopulmonary Dept, 339-8171.
- October 12 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- October 12 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- October 13 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- October 13 **Pathology Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351, Ext. 313.
- October 17 **Tumor Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351, Ext. 313.
- October 17 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- October 18 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, to be announced, to be announced, Info: David Rossing, MD 331-3490.
- October 18 **Topics in Clinical Medicine - Audio Teleconference Series;** - 12:30 pm CDT/CT--repeated 12:30 pm MDT/MT; Speaker:Topic: Info: Tom Anowski, USDSM - 357-1480..
- October 18 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Clinical Pathology Conference, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- October 18 **Geriatric Forum** - 7:00 am, RDT Network Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- October 19 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- October 19 **Cath Conference** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Alice Glirbas - 333-2766.
- October 19 **Neuroscience Grand Rounds** - 8:00 am, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- October 19 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- October 20 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- October 20 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- October 23 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- October 25 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- October 25 **Topics in Clinical Medicine - Audio Teleconference Series;** - 12:30 pm CDT/CT--repeated 12:30 pm MDT/MT; Speaker:Topic: Info: Tom Anowski, USDSM - 357-1480.
- October 25 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: Jerry Rosen, MD, Topic: Sleep Symposium, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- October 26 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- October 26 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- October 26 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- October 26 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- October 27 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- October 27 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- October 30-31 **PALS Provider** - McKennan Hospital, Sioux Falls; Info: Darcy Sherman-Justice, 339-8096.

MISCELLANEOUS

SEPTEMBER

- September 28-29 **22nd Mayo Clinic Pediatric Days**, Mayo Clinic, Rochester, MN. Fee: \$230. 12 hrs AMA Category 1 credit. Contact: Registrars, Mayo Foundation, Section of CME, 200 First St, SW, Rochester, MN 55906. Phone: 800-323-2688.
- September 29 **13th Annual North Central Heart Institute Fall Symposium**, Ramkota Inn Conv Ctr, Sioux Falls, SD. Fee: \$25. 7 hrs AMA Category 1 credit. Contact: Seminar Program Coordinator, North Central Heart Instit, PO Box 5054, Sioux Falls, SD 57117-5054. Phone: (605) 331-0716.
- September 29-30 **Cardiovascular Research Conference**, Ramkota Inn, Sioux Falls, SD. Contact: American Heart Association, Barb Sand, PO Box 1287, Jamestown, ND 58402. Phone: 800-437-9710.
- September 30 **Anesthesiology Conference**, Marriott Hotel, Omaha, NE. AMA Category 1 credit avail. Contact: Sally C. O'Neill, Ph.D., Assoc Dean, Creighton Univ CME Div, 601 N 30th St, #2130, Omaha, NE 68131. Phone: 800-548-2633.

OCTOBER

- October 5-7 **Contemporary Cardiothoracic Surgery**, The Ritz-Carlton Hotel, St. Louis, MO. Fee: \$450. 20.5 hrs AMA Category 1 credit. Contact: CME, Washington Univ School of Med, Campus Box 8063, 660 S Euclid Ave, St. Louis, MO 63110-1093. Phone: 800-325-9862.
- October 12-14 **Annual Orthopaedic and Trauma Conference**, Pillsbury Aud, Hennepin County Med Ctr, Minneapolis, MN. AMA Category 1 credit avail. Contact: Hennepin County Med Ctr, Off of Academic Affairs, 701 Park Ave, Mail Code 869-A, Minneapolis, MN 55415-1829. Phone: (612) 347-2075.
- October 12-15 **American Association of Cardiovascular and Pulmonary Rehabilitation**, Minneapolis Convention Center, Minneapolis, MN. Contact: Sally C. O'Neill, Ph.D., Assoc Dean, Creighton Univ CME Div, 601 N 30th St, #2130, Omaha, NE 68131. Phone: 800-548-2633.
- October 18-20 **13th Biennial Great Lakes Regional Conference - Prevention Strategies for Cardiovascular Diseases**, Mayo Med Ctr, Rochester, MN. Fee: \$125. 12 hrs AMA Category 1 credit. Contact: Registrars, Mayo Foundation, Section of CME, 200 First St, SW, Rochester, MN 55905. Phone: 800-323-2688.

NOVEMBER

- November 1-3 **10th Rural Health Conference, Preparing for Challenge and Change**, Ramkota Inn, Sioux Falls, SD. Contact: SD Off of Rural Health, USD Health Science Ctr, 1400 W 22nd St, Sioux Falls, SD 57105-1570. Phone: (605) 357-1508.
- November 3-4 **Day with the Perinatologist**, Marriott Hotel, Omaha, NE. AMA Category 1 credit avail. Contact: Sally C. O'Neill, Ph.D., Assoc Dean, Creighton Univ CME Div, 601 N 30th St, #2130, Omaha, NE 68131. Phone: 800-548-2633.
- November 9-10 **21st Annual Update on Obstetrics & Gynecology**, EPN Education Ctr, Washington Univ Med Ctr, St. Louis, MO. AMA Category 1 credit avail. Contact: Off of CME, Washington Univ School of Med, Campus Box 8063, 660 S Euclid Ave, St. Louis, MO 63110-1093. Phone: 800-325-9862.
- November 9-11 **Bone Mass Measurement in Osteoporosis and Other Bone Diseases**, Biltmore, Los Angeles, CA. 14 hrs AMA Category 1 credit. Contact: National Osteoporosis Found, Audra Singer, 1150 17th St, NW, #500, Washington, DC 20036-4603. Phone: (202) 223-2226.

THE SOUTH DAKOTA JOURNAL OF MEDICINE

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**Susan Tjarks, President, South Dakota
State Medical Association Alliance**

"Tale of Two Goats"

Brian and I had the chance to take our children to Huron last month and attend the State Fair. The kids couldn't get enough of the midway rides, while we adults enjoyed walking through the animal barns best. I was raised on a small farm (my dad was a CPA that found setting irrigation pipe and working with horses and cows to be therapeutic) and there is nothing that floods me with memories and makes me feel so nostalgic as does the smell in a horse barn. We always had about forty head of cattle, several horses and at different times dabbled in pigs, chickens, rabbits and goats. At the Twin Falls County Fair and Rodeo in Filer, Idaho, you could almost always find one of the Beckstead (my maiden name) kids in the various animal barns tending to the animal they chose to show off that year.

One year in particular, my youngest brother, Scott, had chosen to enter his two neutered, male goats, Amos and Andy, in the fair. They weren't anything really special except that Scott had taught them to stand on their hind legs and dance. Unfortunately, that was not one of the qualities that the judges looked for in the judging arena. I will never forget the day that Scott had to show the two goats. My mother, being the blessed woman that she is, agreed to show Amos while Scott showed Andy. If you've ever watched the showing and judging process at a fair, you know that there is quite a bit of pomp and circumstance that goes with it. To

Scott's (and Mom's) good fortune, only a few goats had been entered that year. But nothing could have prepared them for the surprise they received when the judges announced that Scott's two neutered, male goats were receiving the Grand Champion Prize in the DAIRY DIVISION!!!!

My family always gets a good laugh from that story and wonders how people who were put in the position to judge these animals could make such a blatant error. But you know, it is really not unlike what happens very frequently in our own state and national legislature. We send people from all walks of life; farmers, lawyers, small business owners, etc, to Pierre and Washington, DC and ask them to make decisions regarding issues with which they have little or no experience. And when it is all said and done, we step back and wonder why somebody was "awarded a prize" that they didn't deserve or possibly didn't even qualify for.

Now I realize that as medical families our spare time is precious and scarce. But when you stop to really contemplate the magnitude of the decisions we are sending our Senators and Representatives to make, and the potential impact it can have on us personally, you begin to realize that working with these people is a responsibility we cannot shirk. We must begin to look at medicine as our family business, and together we must work to preserve the quality of this profession which we share.

Dr Mary Carpenter and I have both agreed that legislation is one of our greatest areas of concern this year. Consequently, the Medical Association and South Dakota Medical Group Management Association are working together to plan a program which will feature a nationally known speaker on training the medical; community in legislative matters. This workshop has been scheduled for November 17, at the Cedar Shores Resort near Chamberlain. I strongly encourage all of you to attend so that we may perform this task of training those in policy-making positions in a way that will truly benefit all South Dakota physicians and their families.

Susan Tjarks

PS: For more information on this legislative training program, please contact Bob Johnson at the State Office Building (605) 336-1965. HOPE TO SEE YOU THERE!!

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Gonadotropin Control of Follicle and Oocyte Maturation: Implications for Ovulation Induction

John D. Brannian, Ph.D and David H. McCulloh, Ph.D

ABSTRACT

Development and maturation of follicles and oocytes during the menstrual cycle are complex processes that are poorly understood. Current gonadotropin therapy for ovulation induction/IVF may result in the production of suboptimal oocytes. As we learn more about the interdependency of follicle and oocyte in natural cycles, we should enhance our ability to produce better quality oocytes in artificial cycles. This will lead to improved success in the treatment of infertility.

INTRODUCTION

Final development and maturation of the preovulatory follicle is under the direct control of the pituitary gonadotropins, follicle-stimulating hormone (FSH) and luteinizing hormone (LH), as is maturation of the oocyte. Gonadotropin actions are mediated by complex endocrine, paracrine, autocrine, and intracellular regulators. Although follicle and oocyte maturation are intricately related, they are distinct processes that are poorly understood. Administration of exogenous gonadotropins for ovarian stimulation in the treatment of infertility alters the normal hormonal milieu. This undoubtedly leads to perturbations in the sequence and timing of maturational events. The purpose of this review is to provide an overview of current concepts of follicle and oocyte maturation and their implications for clinical infertility practice.

FOLLICLE MATURATION

For the most part, early follicular growth is independent of gonadotropins. However, growth and development beyond the pre-antral stage (~ 0.25 - 0.5 mm) requires tonic FSH stimulation. FSH acts directly on the granulosa cells that envelop the oocyte by stimulating cell proliferation and promoting antral fluid formation. Continued follicular development is reflected by increasing estrogen production in response to the coordinated actions of FSH and LH acting on the granulosa and theca cells, respectively. Aromatase (the enzyme that converts androgens to estrogens) is expressed exclusively in FSH-stimulated granulosa

cells. LH stimulates the theca cells to produce androgen precursor. As the follicle matures, FSH induces the expression of LH receptors in granulosa cells, thus making them responsive to LH stimulation. Moreover, FSH stimulates the granulosa cells to synthesize and secrete paracrine factors such as the protein hormones, activin and inhibin. Activin is secreted by small antral follicles, whereas dominant follicles produce inhibin.¹ These proteins seem to be critical for follicle development, follicular dominance, and final maturation and ovulation. (Figure 1)

In normal young women, about twenty small (2-5 mm) antral follicles are present in the ovaries at the beginning of each menstrual cycle. Development beyond this stage requires a threshold level of FSH stimulation. Although the threshold varies among individuals, the difference between a stimulating level and a sub-threshold level of FSH may be as little as 10-20%.² Moreover, the maturing follicle becomes increasingly more sensitive to FSH; its threshold becomes lower.³ Or said another way, the level of FSH needed to sustain preovulatory follicle development is less than that needed to initiate development. As FSH concentrations rise at the beginning of each menstrual cycle, a cohort of small antral follicles is recruited to begin preovulatory development. Only one follicle is destined to become dominant and ovulate. According to the prevailing hypothesis (Figure 1), the follicle whose granulosa cells have the lowest FSH threshold will become the first to secrete estrogen by virtue of induction of its granulosa cells' aromatase system.^{2,4} The estrogen and inhibin produced by this follicle act

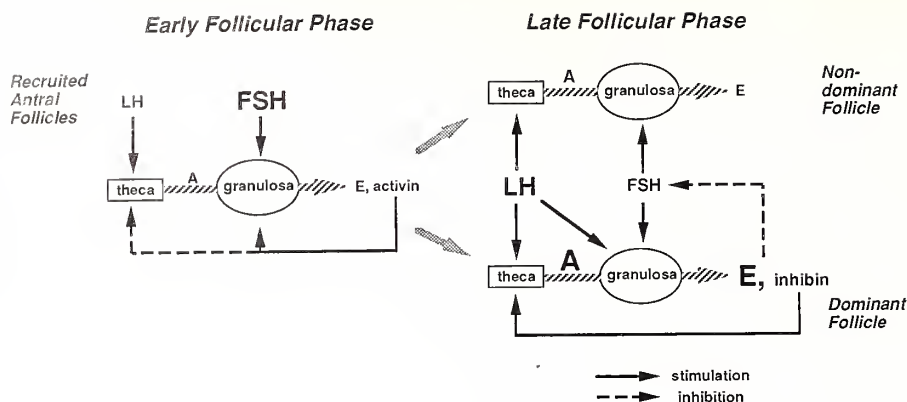


Figure 1

In the early follicular phase of the menstrual cycle, FSH stimulates growth and induces aromatase in granulosa cells of recruited antral follicles. In response to FSH, granulosa cells secrete activin which enhances the action of FSH on the granulosa cells but antagonizes LH stimulation of androgen (A) production by thecal cells. Once selection of the dominant follicle occurs in the late follicular phase, the granulosa cells of the dominant follicle require less FSH and become more dependent upon LH. The dominant follicle, by virtue of its high estradiol (E) and inhibin production, suppresses FSH secretion by the pituitary thereby limiting further development of the non-dominant follicles. In addition, inhibin enhances the action of LH on thecal cells in promoting androgen precursor. This creates a positive feedback loop resulting in greater estrogen production by the dominant follicle.

on the pituitary to suppress FSH release. Circulating FSH declines thereby preventing the thresholds of the other follicles from being reached.

In addition, there are multiple intraovarian regulatory systems that facilitate this process. Notably, activin enhances the action of FSH in inducing aromatase activity in granulosa cells,⁵ but antagonizes thecal androgen production.⁶ Conversely, inhibin potentiates the action of LH in stimulating androgen production by the theca cells.⁷ Thus activin promotes follicle growth and primes the follicle for estrogen production, but seems to oppose dominance by keeping androgen precursor in check. Inhibin on the other hand promotes the estrogenic capacity of the dominant follicle (in which the aromatase system is mature) by increasing precursor androgens, and concurrently counters further development of non-dominant follicles by suppressing pituitary FSH release. Follicles whose threshold is not reached will undergo atresia. In this way the selected follicle maintains its dominance at the expense of the other follicles in the cohort.

With the induction of LH receptors on the granulosa cells, maintenance of aromatase activity and inhibin production is no longer solely dependent upon FSH. Therefore the obligatory dependence of the follicle on FSH lessens and the dominant follicle relies increasingly on LH support.⁴ Although LH is believed to be important for normal preovulatory follicle development and maturation, excessive exposure to LH can have detrimental effects on follicle development.⁴ Supraphysiological doses of LH cause granulosa cell proliferation to cease and inhibits aromatase activity.⁸ Follicles exposed to excessive levels of LH become atretic or prematurely luteinized depending on the

stage of development.⁹ This has led Hillier⁴ to propose that in addition to having a threshold for FSH stimulation, follicles also have a "ceiling" for LH stimulation. Normal preovulatory development will only proceed if LH levels are maintained below this ceiling. When the ceiling is ultimately surpassed by the LH surge, further development ceases and the follicle luteinizes. The fact that initiation of the LH surge is triggered by increasing estrogen levels ensures that the preovulatory follicle does not reach its LH ceiling too soon. In addition a non-steroidal factor, gonadotropin surge-attenuating factor (GnSAF), produced by the preovulatory follicle acts on the pituitary to delay the LH surge until follicular maturation is complete.¹⁰

OOCYTE MATURATION

After mitotic proliferation of germ cells in the fetal ovary, oocytes enter meiosis but become arrested prior to the first meiotic division. They remain developmentally inactive for up to several decades when, in response to the LH surge, they resume meiosis in the periovulatory follicle. The oocyte completes the first meiotic division and progresses to metaphase II (M2) by the time of ovulation. Oocyte maturation refers to the reinitiation of meiosis and subsequent progression to M2, and the concomitant cytoplasmic changes that prepare the oocyte for fertilization and early embryonic development. Oogenesis is not completed however until egg activation, normally occurring with fertilization, triggers the oocyte to complete the second meiotic division. The fertile life of oocytes, defined as the interval during which the fertilized egg can develop into a normal fetus, is relatively very short and may be considerably shorter than the interval during which the egg can be fertilized.¹¹ In rodent models advancement of meiotic resumption with respect to ovulation, induced by a brief infusion of exogenous LH, has a negative impact on fertility but not on fertilizability.¹²

After remaining developmentally and metabolically quiescent for several years, the oocyte enters a growth phase within the growing antral follicle. During this time the oocyte increases greatly in size and acquires the ability to resume meiosis, or "meiotic competence". Oocytes retrieved from preantral follicles are not meiotically competent and will not resume meiosis.¹³ The earliest discernible evidence that meiosis has been

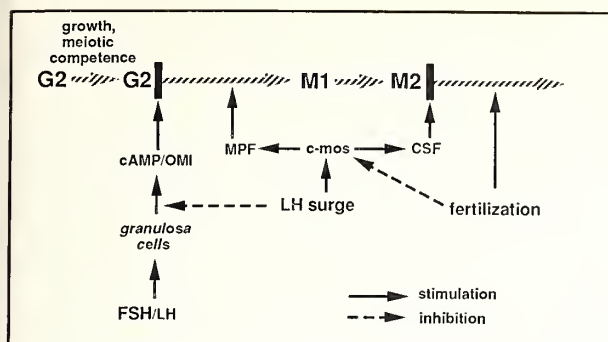


Figure 2

Oocyte meiosis is arrested at prophase I of the first meiotic division in the prenatal ovary. In the growing FSH-dependent antral follicle, oocyte growth (G2) occurs and meiotic competence (the ability to resume meiosis) is acquired. However, meiotic arrest is maintained by factors, e.g. cyclic AMP (cAMP) and oocyte maturation inhibitor (OMI), produced by gonadotropin-stimulated granulosa cells. In response to the LH surge, granulosa-derived inhibition is removed and a maturation-promoting factor (MPF) is activated. Meiosis proceeds to metaphase II (M2) but is again arrested by a cytostatic factor (CSF). MPF and CSF are believed to be controlled by the c-mos protein. Finally at fertilization, M2 arrest is relieved by a decline in c-mos and CSF, and the oocyte completes meiosis.

resumed is the breakdown of the nuclear envelope or germinal vesicle (GV). GV breakdown is initiated either by the LH surge or by follicular atresia.¹³ In the normal menstrual cycle, the first meiotic division, completed approximately 34-38 hours after the onset of the spontaneous LH surge, coincides closely with ovulation which occurs 2-4 hours later.¹⁴

Meiotic arrest in competent oocytes is believed to be maintained by some factor(s) originating from gonadotropin-stimulated granulosa cells of the follicle. (Figure 2). Several putative mechanisms have been proposed.¹³ The intracellular second messenger, cyclic AMP (cAMP), seems to play a central role and may be aided by an "oocyte maturation inhibitor" (OMI). Moreover, empirical evidence implicates inhibin as an oocyte meiotic inhibitor.¹⁵

Details of how these substances maintain arrest at the first meiotic prophase are controversial. Nevertheless, with the onset of the LH surge, granulosa-derived inhibition is turned off. Simultaneously a "maturation-promoting factor" (MPF) is turned on within the oocyte that triggers resumption of meiosis. The first meiotic division is completed but meiosis is again arrested at M2. M2 arrest is due to a "cytostatic factor" (CSF) that is activated within the oocyte. It is believed that activation of MPF and CSF is mediated through a common pathway by the translation product of the c-mos protooncogene. Thus a single intracellular signal re-initiates meiosis and prevents progression beyond M2. CSF is thought to be de-activated by the decline in c-mos product that occurs in response to fertilization. (Figure 2) Meiosis is finally completed after removal of CSF inhibition.

Although in the natural cycle the temporal relationship between oocyte maturation and ovulation are tightly coupled, the two processes can be experimentally dissociated.¹³ Oocytes removed from antral follicles will "spontaneously" mature in the appropriate culture medium without any follicular support. Conversely, a premature ovulatory stimulus results in the ovulation of immature oocytes.¹⁶ Thus ovulation and oocyte maturation are not mutually dependent processes. In fact in some animal species (e.g. dogs) ovulation and oocyte maturation are naturally asynchronous.¹³ Therefore there is no reason to believe that under artificial conditions, such as during the administration of exogenous gonadotropins in women, that these events will be intrinsically synchronized.

CLINICAL IMPLICATIONS

Although we understand much of what happens during maturation of the follicle and maturation of the oocyte, the critical link between follicle and oocyte remains obscure. The rationale commonly used in clinical practice is that a mature follicle equates to an optimal oocyte. Reliance upon this assumption may be one of the major problems underlying the relatively poor world-wide success of ovulation induction and in vitro fertilization (IVF).

Gonadotropin therapy for ovulation induction/IVF involves two phases: (1) recruitment and preparation of oocytes prior to resumption of meiosis (e.g. acquisition of meiotic competence), and (2) release of oocytes from meiotic arrest. Recruitment and preparation of oocytes is accomplished by treating the patient with exogenous pituitary gonadotropins (FSH/LH), whereas release from meiotic arrest is achieved by administration of hCG to mimic the ovulatory stimulus (i.e. LH surge). The birth of tens of thousands of children as a result of gonadotropin therapy in subfertile couples is proof of the capability of the treatment. However, the failure to achieve pregnancy in 70%-80% of attempts should lead us to question its universality. High failure rate taken together with the accompanying high incidence of multiple gestations among successful patients, suggest that ovulation induction/IVF is extremely effective in a relatively small patient population but may be ineffective for a large number of patients.

During IVF, 8-15 oocytes are routinely retrieved. One of the reasons gonadotropin therapy is preferred over clomiphene citrate therapy and natural cycles is the larger yield of oocytes. The prevailing emphasis until recently has been to increase the number of oocytes available in order to increase the patient's chances of achieving pregnancy. While it seems intuitively apparent that a patient's chances for pregnancy should be greater with more oocytes produced, it is clear that all oocytes are not equal. Therefore optimizing oocyte quality would seem to be a more sound goal than maximizing oocyte number. Multiple follicular maturation with exogenous gonadotropins results in the rescue of oocytes that would otherwise be destined to atresia. The degree to which oocytes may be irre-

versibly predisposed to atresia prior to the onset of therapy is not known.

Treatment is designed to act upon or mimic the pituitary's control over the ovary. However, there is no assurance that each follicle behaves appropriately. Hence there is no assurance that oocytes achieve optimal quality. Paracrine and autocrine agents (e.g. inhibin, activin, IGF, TGF, etc) are not monitored, not controlled and may have altered effects in the unnatural treatment cycle. The dominant follicle in natural cycles may signal other follicles to become atretic. In multiple follicular recruitment, gonadotropins may override follicular atresia. This is supported by the fact that supraphysiological levels of FSH are required to sustain development and maturation of multiple follicles in hMG cycles.¹⁷ It is not yet clear whether the presence of several dominant follicles results in high levels of paracrine atretogenic substances (e.g. activin or inhibin) that may have detrimental effects on oocyte quality. Indeed at least one study reported that during hMG therapy, inhibin levels were as much as 15-fold greater than in natural cycles.¹⁸ Inhibin and activin have been implicated as mediators of oocyte meiotic maturation.^{15,19} The effects of supraphysiological levels of substances such as inhibin on oocyte quality remains to be determined.

The timing of hCG administration is probably the most critical point in the stimulation cycle. Ideally, during therapy we would like to monitor direct indicators of oocyte quality, i.e. measures of their growth and maturity. Unfortunately, the appropriate parameters to assess are unknown and probably are not measurable in serum or by current imaging techniques. Indeed MPF, OMI and cAMP are cytoplasmic signals important in the oocyte but not accessible to monitoring. Without direct indicators of oocyte growth and maturity, we must rely on indirect indicators (e.g. follicular response to gonadotropins) that have been empirically correlated with maximal incidences of pregnancy in large numbers of patients. Such empirical correlations are difficult to assess in infertile couples since failure to become pregnant usually involves many factors other than oocyte quality. The problem is exacerbated by interpatient variability, e.g. different numbers of follicles, different rates of growth, different gonadotropin requirements (FSH thresholds), etc, making decisions as to when oocytes are optimal very difficult.

Three parameters have been used in large numbers of patients that have been correlated with pregnancy success: (1) days of gonadotropin stimulation, (2) follicle diameter/volume, and (3) serum estradiol concentrations. The number of days of stimulation was an early criterion used to determine when to administer hCG. In mimicking the natural cycle, roughly 12 days of gonadotropin therapy were routinely used. More recent evidence suggests that follicles of smaller diameter following fewer days of stimulation may yield better pregnancy outcomes from ovulation induction/IVF. The use of 7-9 day protocols may be beneficial by avoiding the LH ceiling of the more ad-

vanced follicles. It may be worthwhile to revisit the use of days of stimulation as an inexpensive determinant of the timing of hCG administration.

Follicle size (antral diameter) can be measured using ultrasonography allowing the physician to monitor changes in antral volume which increases exponentially during late follicular development. Estradiol levels should rise exponentially in parallel with antral volume. Either parameter may be adequate once exponential growth of the follicle is apparent. However, measurement of follicle diameter permits independent monitoring of individual follicles. It has been our clinical experience that the incidence of pregnancy seems to be improved by avoiding the production of very large follicles (> 20 mm), supporting the view that paracrine effectors may be released from large follicles that negatively influence oocyte quality.

CONCLUSIONS

Follicle maturation and oocyte maturation are complex, inter-related but distinct processes that are still being elucidated. The greatest void in our understanding is the interdependency of these processes in both natural and artificial cycles. Manipulation of the natural cycle undoubtedly alters the normal physiology in ways that we can only speculate. Thus we must rely on empirical information upon which to base our clinical decisions.

Basic research indicates that FSH administration with basal levels of LH are sufficient to yield fertile oocytes in most women. In addition, high levels of LH are correlated with poorer outcomes.²⁰ The fertility of oocytes (as measured by the incidence of pregnancy) appears to be at least as good in patients treated with FSH alone (e.g. Metrodin) as with those treated with FSH in combination with LH (e.g. Pergonal). In light of the equivocal clinical results together with the rather more strong basic research evidence questioning the need for elevated LH and warning of potential negative effects of excess LH, it seems prudent to use FSH preferentially for initial stimulation. Our experience at the Fertility Institute at the Brooklyn Hospital Center has been that women receiving over four ampules of Pergonal (300 IU FSH:300 IU LH) per day have a significantly lower incidence of pregnancy following IVF. Whether this is due to over-exposure to LH or is simply a consequence of the subfertility that led to the necessity for high doses of gonadotropins is unknown.

In the future we will learn more about the roles and appropriate levels of paracrine/autocrine factors such as activin and inhibin. These may help us to better perform hormonal therapy yielding more oocytes of optimal quality rather than simply more oocytes.

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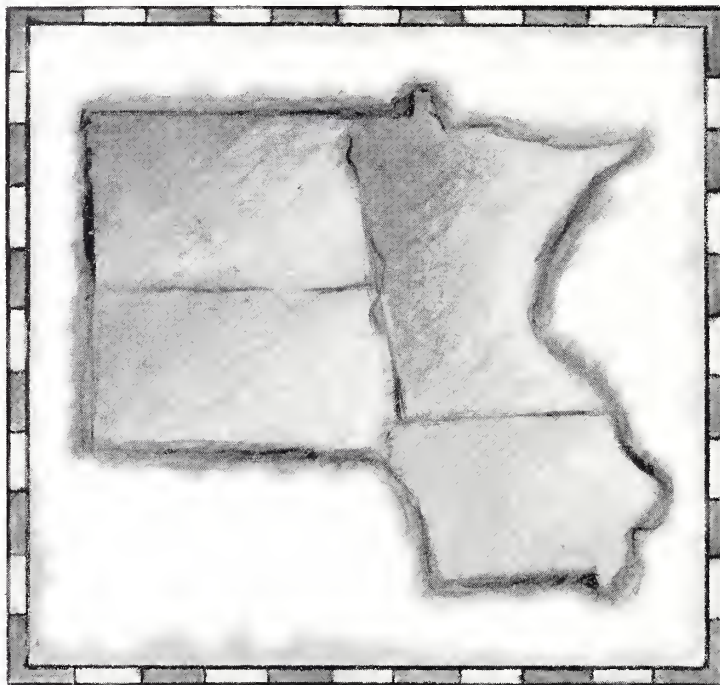
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On Chance and Compromise

Increasingly, as I talk to students about the nature of medical practice, I find myself using the language of chance and compromise. It seems worthwhile to stress these concepts since medicine is so scientifically based and can be so rigidly practiced. In many ways, it is hard not to be proud and self-confident as a physician, following the path of the mythological Asclepius who demonstrated that medicines and surgery can subdue the woes of nature. Certainly, in this era of reverence for science and technology, it can be challenging to cope with the intrusion of chance and compromise.

In this context, I readily recall the case of a 70 year old lady with new onset of numbness and tingling in her feet. Such symptoms suggest nerve injury (neuropathy) and invariably prompt a veritable Pandora's box of testing. To thoroughly look for "treatable causes" of neuropathy, one must screen for diabetes, thyroid disease, syphilis, vasculitis, and B12 deficiency. Moreover, this Pandora's box frequently unleashes the furies of frustration in that about half of all patients with neuropathy, a specific cause is not found. While cancers can cause such neuropathic symptoms, as a remote effect, the yield of scrutinizing each patient with neuropathy for hidden tumor is very low. Indeed, it is so low that fiscal prudence might question a detailed search for malignancy, especially in the context of a managed care environment.

In any event, in this particular patient, something (I am still not certain what) inclined me to include the possibility of occult malignancy in my working differential diagnosis. I opted to obtain both a chest x-ray and stool specimens for blood. The patient proved to have a circumscribed colon carcinoma. After its removal, her neuropathy symptoms abated and I became a hero to her and her family. In subsequent meetings, they have proudly reminded me, and told others, of how a little bit of numbness in her feet led me to find her hidden colon cancer.

Upon reflection about this anecdote, I am much less enthralled with my diagnostic acumen, and much more humbled by how lucky we (and patients) can be when we sometimes tumble to diagnoses. In this patient's case, some fortuitous clinical attribute must have tipped my subconscious to favor supplementing customary tests. I shudder to think of how easily I could have foregone ordering the additional tests and, thus, not discovered the malignancy.

Recently, I was discussing the issue of serendipity and chance with a group of undergraduate students. They expressed skepticism and disbelief that standard, exhaustive clinical programs could not be developed to eliminate chance and uncertainty in the clinical realm. The discussion that ensued with this group was very

interesting. Ultimately, we all concluded that if a diagnostic protocol is to be comprehensive, it will necessarily be costly in terms of testing. If it is spare, in terms of endorsing only the most clinically relevant possibilities, the protocols necessarily will not include all remote etiologic possibilities. Oftentimes, some form of clinical compromise is made in terms of how exhaustive testing will be.

Such reflections are disconcerting. In the end, I believe that both my patient and I were very fortunate that I somehow intuited a need to check her for occult malignancy. There are many clinical instances when I would not necessarily do this. And there are many times in clinical practice when I rue the fact that medicine is so fickle and so potentially modulated by the whims of chance. Invariably, as physicians try to serve, we play a dangerous game. The enemy can be within us, and all around us as well.

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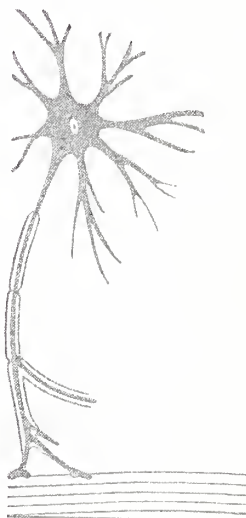
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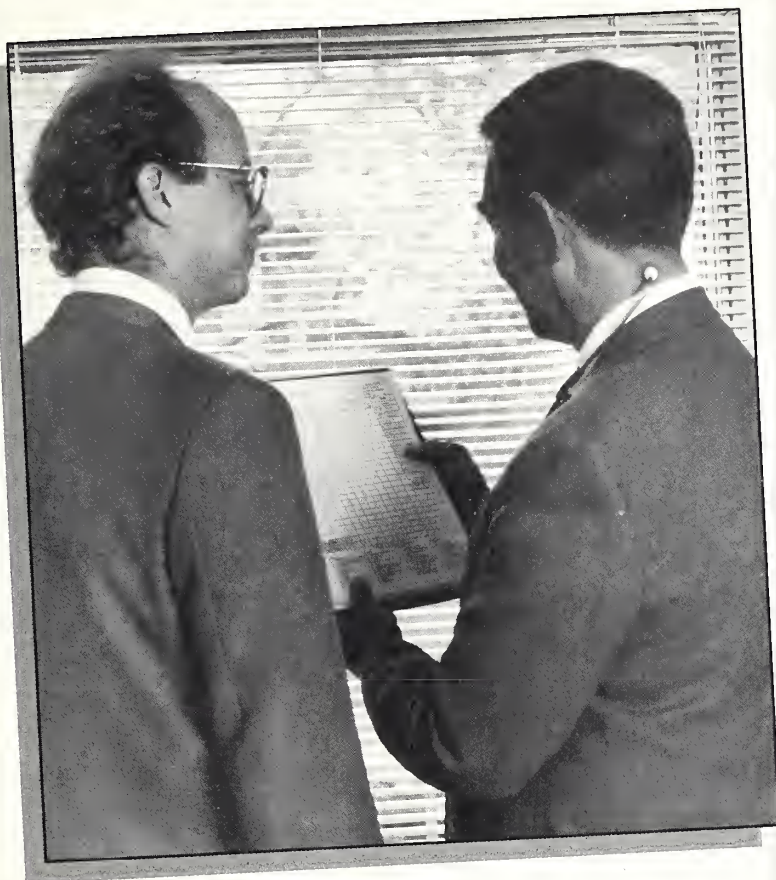
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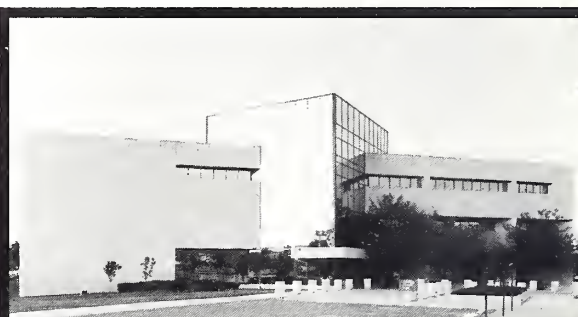
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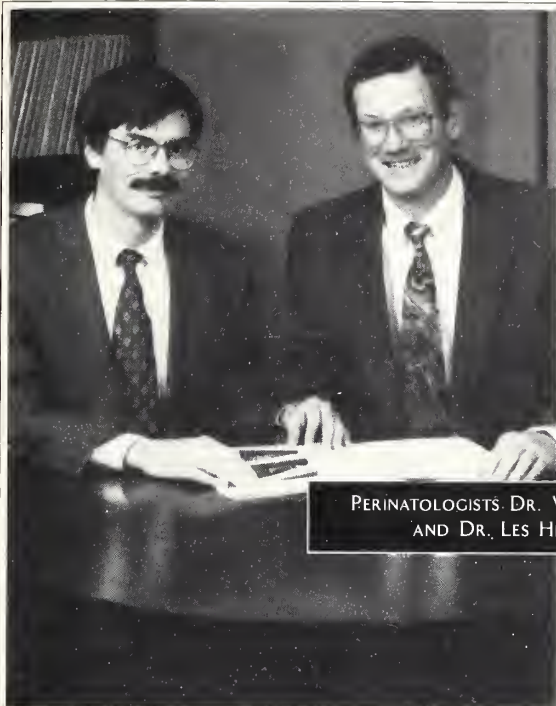
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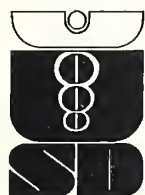
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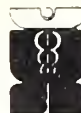
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Pheochromocytoma Associated with Polycythemia: Case Report

M. A. Rezkalla, MD, S. N. Rizk, MD and J. J. Ryan, MD

ABSTRACT

Secondary polycythemia has been noted in association with various neoplasms. An erythropoiesis stimulating factor (erythropoietin) has been demonstrated in the fluid or tissues obtained from most of these neoplasms and erythropoietin levels were found to be elevated in the serum and returned to normal after resection of these tumors. Recently, the potential of pheochromocytoma to produce a wide variety of hormones and neurotransmitters such as growth hormone, motilin, ACTH, atrial natriuretic factor (ANF) and others has been shown. Although elevated hematocrit has been observed in association with pheochromocytomas, the occurrence of absolute polycythemia in such cases is very rare. In this report, we describe a patient with a long history of hypertension and cardiac dysrhythmia as well as polycythemia which was secondary to pheochromocytoma. The patient's blood pressure normalized and the polycythemia regressed after resection of the tumor. Increased release of erythropoietin is the most favored explanation for this rare association. Pheochromocytoma should be included in the differential diagnosis of secondary polycythemia.

CASE REPORT

A 71 year old white male was transferred to our department for further evaluation of a right renal mass seen on ultrasonography. Patient past medical history was remarkable for a history of polycythemia with blood hemoglobin value around 19 gm/dl (N. 12.5-16), and hematocrit around 59% (N. 37-50), with normal white cell and platelet counts. Red blood cell mass was 40 ml/kg (N. 20-36), erythropoietin level was reported to be elevated. Multiple phlebotomies had been required for elevated hematocrit. For the past few months, the patient had a history of difficult to control hypertension and frequent dizzy spells with heart palpitations. Past medical history otherwise was significant for coronary artery disease with an inferior wall myocardial infarction as well as intermittent atrial fibrillation. He quit smoking 40 years ago and family history was unremarkable.

On examination, the patient had a ruddy complexion and irregular pulse with a rate around 80. Skin was warm and dry with no cyanosis, the liver and spleen were not palpable. The rest of the physical examination was essentially unremarkable. Laboratory studies revealed hemoglobin of 16 gm/dl (N. 12.5-16), hematocrit 51% (N. 37-50), and white blood cell and platelet counts within normal limits (done after recent phlebotomy). Blood urea nitrogen (BUN) and serum creatinine were 23 ml/dl (N. 7-22) and 1.4 mg/dl (N.

7-1.3), respectively. Serum values for calcium, phosphate, albumin, alkaline phosphatase, glutamic oxaloacetic transaminase, lactic acid dehydrogenase, bilirubin, B₁₂ and leukocyte alkaline phosphatase were normal. Arterial blood gasses were pH of 7.43, carbon dioxide tension of 38 (N. 35-45) and oxygen tension of 76 (N. 75-100) and oxygen saturation of 93%.

Computed tomography (CAT) of the abdomen revealed a 6 x 6 x 5 cm mass close to the superior medial aspect of the upper right kidney felt to represent an adrenal mass rather than a kidney mass, and the rest of the abdomen was essentially unremarkable.

Twenty-four hour urine for metanephrine was elevated at 1130 microgram per 24 hours (N. 44-300), normetanephrine was elevated at 3326 (N. 110-620 microgram per 24 hours). An elevated total metanephrine was 4457 (N. 140-820 microgram per 24 hours). Vanillylmandelic acid (VMA) quantity was also elevated at 9.7 microgram per 24 hours with normal less than 6. Given the above, a presumptive diagnosis of pheochromocytoma was made, and after adequate hydration, alpha and beta blockade, the patient underwent right adrenalectomy. The operation was done without difficulty and the pathological diagnosis was consistent with pheochromocytoma. (Figure 1)

Postoperatively, patient hemoglobin and hematocrit were around 13 gm/dl and 38%, respectively, and remained in the normal range at six months and a year

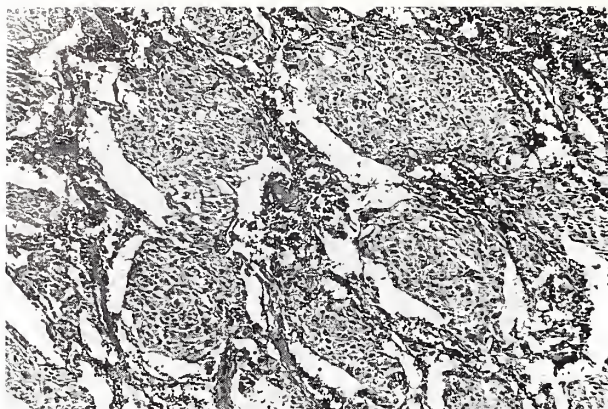


Figure 1

The low power view (original magnification 200X) illustrates the characteristic "Zellballen" arrangements of tumor cells of a pheochromocytoma, surrounded by a fibrovascular stroma.

follow-up. Blood pressure was also normalized and antihypertensive agents were no longer required.

DISCUSSION

Hematocrit above 54% for men or 50% for women should lead the physician to question whether the patient has a polycythemia or not. The hematocrit or per cent packed red cell volume usually reflects the ratio of red cells to plasma. Thus, the hematocrit may be elevated either if there is truly an excess of red cells or if there is decreased plasma volume as in dehydration. It wasn't until 1952, however, that direct measurement of the red cell mass became available.¹ This test will distinguish between absolute polycythemia in which the red cell mass is truly expanded and relative polycythemia in which the red cell mass is normal, but the plasma volume is contracted.¹

Relative polycythemia or, rather, relative erythrocytosis (also called spurious, stress, or Gaisbock polycythemia) is a condition characterized by an elevated hematocrit despite a normal or decreased total red cell mass. This is usually seen in patients with diminished plasma volume as a result of dehydration, but it can also be seen in asymptomatic middle-aged males with long history of hypertension, obesity or excessive smoking. Their hematocrit values usually between 55% -60%, the red cell mass is usually normal, and the plasma volume is contracted for unknown reasons. The pathophysiology of relative polycythemia in this case is not well understood, and because the red cell mass is normal, aggressive phlebotomy is usually not indicated.^{1,2}

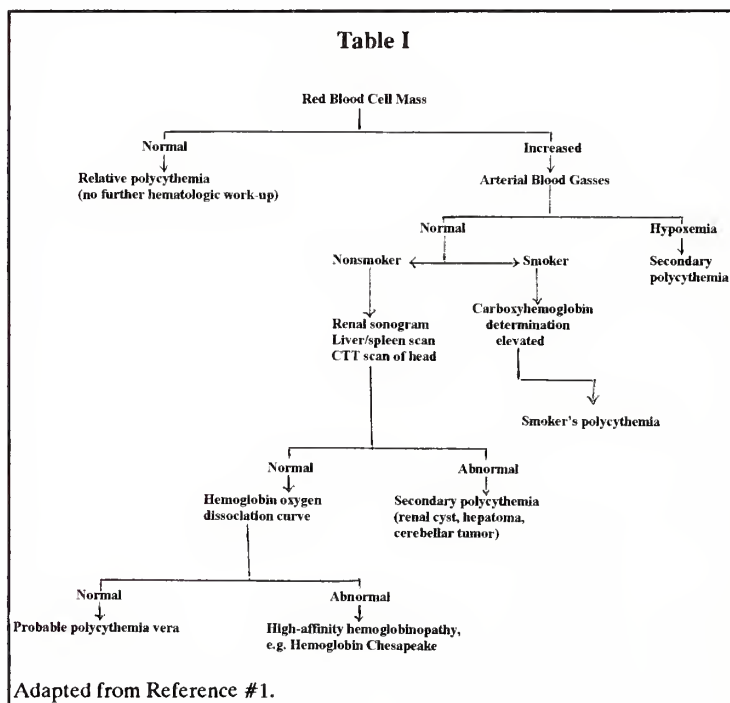
As noted, an elevated red cell mass (men > 36 ml/kg; women > 32 ml/kg) defines absolute polycythemia. Absolute polycythemia may be primary as in the autonomous increase in red cell production that occurs in polycythemia vera, or it may be secondary to a physiological mechanism driving the red cell production to a higher than normal level.

Probably the most common examples of secondary (absolute) polycythemia is polycythemia secondary to hypoxemia as seen in cardiopulmonary disorders and polycythemia secondary to elevated carboxyl hemoglobin level (smoker's polycythemia). (Table I)

Secondary polycythemia has also been noted in association with various neoplasms including renal tumors, renal cysts, uterine myomas, hepatomas, cerebellar hemangiomas, as well as aldosterone producing adenomas.³⁻⁶ An erythropoiesis stimulating factor (erythropoietin) has been demonstrated in the fluid or tissues obtained from most of these neoplasms.⁷ Erythropoietin levels were found to be elevated in the serum and returned to normal after resection of these tumors.^{1,3-6}

Although elevated hematocrit is not an uncommon finding in association with pheo-chromocytoma, the occurrence of absolute polycythemia in association with pheo-chromocytoma is very rare.^{8,9} Of 130 patients with benign and malignant pheochromocytomas evaluated at University of Michigan Medical Center, only 6 patients have had hematocrit greater than 50 and only 1 of those 6 had hematocrit above 55.⁹ Of 11 patients with pheo-chromocytoma studied at the Cleveland Clinic, none had a significant increase in the erythrocyte mass.¹⁰

The exact pathogenesis underlying the association of polycythemia and pheochromocytoma is still unclear. A reduction in plasma volume (relative polycythemia) has been suggested as the underlying factor for the observed increases in hematocrit,⁸ and that this effect may be further exacerbated by increased elaboration of atrial natriuretic peptide which can be produced by the pheochromocytoma cells.¹¹ The most widely



accepted explanation for the rare association of secondary polycythemia and pheochromocytoma appears to be increased release of erythropoietin. This can occur either because of increased production by the tumor cells itself, or as a consequence of other factors associated with the presence of these tumors.^{6,12,13} In support of this explanation is the fact that erythropoietin-like activity has been extracted from the pheochromocytomas of patients with polycythemia^{7,10} and that the polycythemia resolved after total removal of the tumor. Moreover, Shulkin, et al,⁹ demonstrated excessive erythropoietin immunoactivity in the circulation of a patient with pheochromocytoma and polycythemia. He also demonstrated in his case report that the polycythemia itself may be a cause of major morbidity in patients with pheochromocytoma.

Giving the elevated red blood cell mass, the normal values for leukocytes, platelets and B12 and the normal arterial blood gasses in absence of splenomegaly, in addition to the fact that the polycythemia regressed after removal of the tumor, we believe that our patient had absolute polycythemia secondary to pheochromocytoma.

This report highlights the importance of considering pheochromocytoma in the differential diagnosis of secondary polycythemia and that the polycythemia in such cases may require prophylactic measures to prevent untoward events. We also believe, as with others, that increased release of erythropoietin is the most favored explanation for such association. Since erythropoietin has been either demonstrated or suspected as the responsible stimulus in most cases, it seems reasonable to consider all cases of secondary polycythemia as caused by increased release of erythropoietin.

AUTHORS

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Ketogenic Diet for Seizure Control

Helen Fiechtner, Pharm.D, Sioux Falls, SD

Since biblical times, starvation was known to cause improvement in some patients with seizures. Based on this knowledge, the Ketogenic Diet was developed in the 1920s to simulate the metabolic effects of starvation. With the availability of antiepileptic drugs (AEDs), the use of this diet fell into disuse during the 1940s and 1950s. While others were not using the diet, Johns Hopkins Hospital continued to use and refine the diet. Today, more than 17 medical centers in the United States including SD Children's Hospital and Specialty Clinics* at Sioux Valley Hospital offer the ketogenic diet as a therapy for children with intractable seizures.

The ketogenic diet is being used more and more to offer a treatment alternative to children who do not respond to multiple AEDs. Results vary but the children usually fall into one of three groups. The complete responders are able to have their AEDs discontinued and remain seizure free. Most of these children stay seizure free when the diet is discontinued in two to three years. The middle group responds to the diet and they can have their AEDs reduced in numbers but they cannot have all their AEDs discontinued. This middle group of children may still have a few seizures that are usually milder and shorter in duration than previously seen, with the overall number of seizures greatly reduced. Children who respond to the diet usually become more alert and many are able to gain or regain developmental milestones. The increase alertness can be attributed to less AEDs, fewer or no seizures, and the unknown mechanism of action of ketones on the brain. The last group of children are the diet non-responders. Roughly a third of the children started on the diet will fall into each group but the exact breakdown varies between research studies.

The ketogenic diet usually supplies 3 - 4 grams of fat to 1 gram of protein and carbohydrate (27 - 36 kcal of fat to 4 kcal of protein and carbohydrate). Once the current ratio of fat to protein/carbohydrate calories is determined for that child, the success of the diet relies on carefully following the proper ratio. Smaller children and children with a 4:1 diet ratio have the least amount of carbohydrate calories available in their diets and most of these carbohydrate calories come from foods that are used as fat or protein sources. Any uncounted carbohydrate calories can cause the ketosis to drop and the child can have seizures again. Medications frequently are the cause of unrecognized calories. When a child is started on the diet, as many of his or her medications are discontinued or switched to the form

with the least amount of calories. The calories from the necessary medications are subtracted from the allowed carbohydrate calories before the menu is developed. Later, any new medication must be evaluated for calories before it is given to the child.

Pharmacists or other drug information sources are needed for determining the caloric content of medications and helping with designing the best medication regimen for that child. Because most oral medications contain carbohydrates to some degree, no medication is considered acceptable for use with the ketogenic diet until the ingredients have been checked and the calories calculated. The calories found in some medications are listed as "not sufficient to cause any problems" but in reality they contain one to ten calories and can cause problems for children on the Ketogenic Diet.

Sugars and starches are frequently used to manufacture tablets and capsules. The amount of a particular ingredient varies widely between products so calling the company is necessary to determine the exact amount of carbohydrates. Generics have the same active ingredient as the brand name product but the inactive ingredients vary. Product substitution is not allowed unless the carbohydrate content is checked first.

Sugars are used to make many liquid products palatable. Most liquid medications are not used with children on the ketogenic diet because of the "high" calories in these products. Sugar-free liquids may not be calorie free. Sorbitol used in many sugar-free products has 3.58 kcal/gm. While some Ketogenic Diet Treatment Centers do not count alcohol as a carbohydrate, alcohol can contribute significant amount of calories and we now calculate the calories from alcohol (7kcal/gm). To give medications to their children, parents learn to split and crush tablets, and open and divide capsules.

Children on the Ketogenic Diet see not only their neurologist but also their local health care team and everyone must work together to insure the success of the diet. Health care providers can call the pharmacist on the Ketogenic Diet Team or their local pharmacist when questions about carbohydrate content of medications arise.

*South Dakota Children's Specialty Clinics was previously called Health Center for Children.



This Is Your Medical Association

Robert Van Demark Sr, MD, of Sioux Falls, perhaps the oldest licensed orthopedic surgeon in the nation, died August 25, 1995 at the age of 81 after a lengthy illness.

He was a compassionate doctor who cared for children with disabilities, a pioneer in hand surgery and always a physician hungry for the latest in medical knowledge. He retired in 1994.

"He really is one of the giants of medicine in South Dakota and probably in this region of the country," said Dr Robert Talley, dean of USD School of Medicine, where Dr Van Demark was a faculty member from 1947 to 1993.

Dr Van Demark's uncle, Dr Guy Van Demark, helped start Crippled Children's Hospital & School, now called Children's Care Hospital and School. After his death, the younger Van Demark took over as medical director and traveled the state, giving free assessments to parents who wondered how to treat their children's disabilities.

He was born in Alexandria, November 14, 1913. He graduated from Alexandria High School, Sioux Falls College and attended USD School of Medicine. He received his medical degree from Northwestern University and interned at Passavant Memorial Hospital. He then completed his orthopedic residency at the Mayo Clinic in Rochester, and received his master's degree in orthopedic surgery from the Univ of Minnesota in 1943.

He married Bertie Thompson in Stoughton, Wis, in 1940. During World War II, he served in the US Army Medical Corp as an orthopedic surgeon and rose to the rank of major. He returned to Sioux Falls in 1946 to join his uncle, Dr Guy Van Demark, in practice. During his career, Dr Van Demark served for 33 years as editor of the South Dakota Journal of Medicine, president of the Sioux Valley and McKennan hospital medical staffs, a member of the consulting staff of the Royal C. Johnson Veterans Memorial Hospital and chief of the hand surgery clinic and as president of the South Dakota State Medical Association.

Some of the numerous awards he received include the Award for Outstanding Service from the President's Commission for Employment of the Physically Handicapped, the Humanitarian Service Award for United Cerebral Palsy and Citizen of the Year Award of the South Dakota Press Association. He received the Distinguished Service Award, Community Service Award, and Special Presidential Award from the South Dakota State Medical Association and the C. B. Alford Award given by the SD Health Department.

He is survived by his wife, Bertie; three children: Ruth Van Demark of Evanston, Ill; Dr Robert Van Demark Jr, of Sioux Falls; and Richard Van Demark of Sioux Falls; and seven grandchildren

Robert Wingert, MD, a retired Air Force Colonel, died June 13, 1995, at Fort Meade VAMC in Sturgis. Dr Wingert was born in Canistota in 1934. He graduated from Canistota High School in 1952 and received his BS degree from the University of South Dakota in 1955 and went on to receive his MD degree from the Marquette School of Medicine in Milwaukee, Wisc.

He married Karen Bollinger in 1960, in Bridgewater. He entered the Air Force in 1960 and served from 1960 to 1963 at Truax Field in Madison, Wisc. In 1963, he began an OB/GYN residency at Wilford Hall Hospital in San Antonio, Texas. He served from 1966 to 1968 at Wright-Patterson Air Force Base in Dayton, Ohio; then served as deputy commander at Ellsworth Air Force Base from 1968 to 1971; he served at Offutt Air Force Base, Nebraska from 1971 to 1973; and as deputy commander at Minot, ND, in 1973 to 1974. He, again, served at Ellsworth until 1977, when he left to serve as the Commander of Osan Air Base, Korea. He returned to Offutt Air Force Base and remained until his retirement in 1981.

In 1982, he came to South Dakota and began working for the USD Medical School as a consultant, traveled to both Pine Ridge and Eagle Butte reservations, spent time at the medical school in Rapid City and at Sioux San Hospital. In 1988-89, and for several years thereafter, he was listed in "Who's Who in the Midwest". He received the 1991 Humanitarian Pioneer Award. He was a member of the American College of Obstetrics/Gynecology, the South Dakota State Medical Association, the Black Hills District Medical Society, the Us Too Support Group, and many civic organizations.

He is survived by his wife, Karen, Rapid City; four sons: Robert of Jacksonville, Fla; Scott of Sioux Falls; Mark of Dallas, Texas; and Jon of Vermillion; one granddaughter; one brother, Dr Marvin of Garretson; and three sisters: Velna Tiezan of Rapid City; Veronica Hurry of Colorado Springs, Colo; and Marcia Williams of Brookings.

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Bernard P. Nolan, MD, died June 20, 1995, in Winona at the age of 90. He practice medicine in Mobridge for many years before he retired, in 1974. He was born in Alliance, Neb, on August 16, 1904. He earned his MD degree in 1930, at Creighton Univ in Omaha, Neb. He then practiced medicine in Humphrey, Neb, and Sisseton before coming to Mobridge in 1950.

He served as a physician in the Civilian Conservation Corp and in the Indian Service at Sisseton and Pine Ridge. During World War II, he served as a captain in the US Army, serving two years overseas in the China-Burma-India area. He was also posted in the United States at Fort Francis E. Warren in Cheyenne, Wyo, and in Austin Texas. He married Agnes Aitken at Wabasha, Minn, in 1933. She died in 1991.

Dr Nolan is survived by five sons: Dr Robert Nolan, Columbus, Ohio; Dr J. Patrick Nolan, Everett, Wash; Dr Richard Nolan, Carmel, Ind; Dr Dennis Nolan, Winona; and Timothy Nolan, Steamwood, Ill; a daughter, Catherine Schirber, Albuquerque, NM; 32 grandchildren and 31 great grandchildren; and a sister, Marie Burke, Alliance, Neb.

Robert Stiehl, MD, died June 22 1995, in Winner, at the age of 64. He was born in 1931, in Hay Springs, Neb. He graduated from Hay Springs High School in 1949. He graduated from the Univ of Nebraska at Lincoln in 1953 and then earned his medical degree, in 1957, from the Nebraska Medical Center in Omaha. He did a one-year internship at Bishop Clarkson Memorial Hospital in Omaha.

He married Ramona Gomez, in 1955, in Lincoln. They then moved to Indianapolis, Ind, where he served two years as an officer in the Navy. From 1960 to 1965, Dr Stiehl practiced in Burke and then for the past 30 years he practiced in Winner.

He served as the Tripp County Coroner, past president of the Rosebud Medical Association, member of the South Dakota State Medical Association, the University of Nebraska College of Medicine Alumni Association, the American Medical Association and several civic organizations. Dr Stiehl was honored as the 1994-95 Outstanding American in Who's Who Publications.

In addition to his wife, he is survived by three sons, Robert II of Rapid City; Doug of Spokane, Wash; and Todd of Winner; a daughter, Kathy Farner of Winner; 11 grandchildren and one great-grandchild.

Dr Frank Nellans, anesthesiologist at Queen of Peace Hospital in Mitchell, has been notified by the American Board of Anesthesiology that he has earned board certification. The process requires a four-year residency and favorable scores on both written and oral examinations conducted by the board.

OCTOBER 1995

Oscar J. Mabee, MD, 97, died August 11, 1995 in Mitchell. He was born in 1898 in New Providence, Iowa. He served in the Army during World War I. In 1925, he graduated from the Univ of Iowa at Iowa City with his medical degree, specializing in eye, ear, nose and throat.

He married Hilda Faris in 1925, in New Providence. They then moved to Mitchell and he practiced with his brother Don for a number of years. In 1962, he opened the Mabee Eye Clinic with his son Judd.

His wife died in 1976. He married Bernice Molitor in 1979, in Hand County. He retired in 1980.

He was a member of the First United Methodist Church, Elks Lodge, Masonic Lodge, Shrine and American Legion. He served as president of the South Dakota Medical Association in 1941. He served on the trustees board at Dakota Wesleyan Univ and the board of Mitchell National Bank. He raised purebred cattle and was a pilot and Federal Aviation Administration medical examiner.

Survivors include his wife, Bernice; two children, Judson of Mitchell and Joan Funk of Denver; five grandchildren; and 10 great-grandchildren.

Emil A. Hofer, MD, 87, a retired doctor from Huron, died August 25, 1995. Dr Hofer was born in 1907, on a farm near Lake Byron, where he attended country grade school. Following graduation from the Univ of South Dakota Medical School and the University of Chicago Rush Medical College, he interned at Deaconess Hospital, in Spokane, Wash. He started practicing medicine at Wessington Springs in 1936, and moved his practice to Iroquois the next year.

He married Ann Hodges, in 1940, and they moved to Howard, where he practiced medicine until going to Huron in 1950. He retired in 1982. He served as a Huron city health officer for 31 years and was a member of the Congregational United Church of Christ.

In addition to his wife, he is survived by a son, Ronald, and a daughter, Marilyn Loken, both of Rochester Hills, Mich; four grandsons; and two sisters: Elizabeth Waldner and Susie Gross, both of Huron.

The University of South Dakota School of Medicine announces the following faculty members have been approved for promotion or tenure by the South Dakota Board of Regents: **LuAnn Eidsness, MD**, promoted to associate professor in the Dept of Internal Medicine; **Lori Hanson, MD**, associate professor of Internal Medicine, granted tenure; **Dennis Stevens, MD**, promoted to professor in the Dept of Pediatrics; **Kevin J. Vaska, MD**, promoted to associate professor in the Dept of Internal Medicine; and **H. Bruce Vogt, MD**, professor of Family Medicine, granted tenure.

The Department of Family Medicine at USD School of Medicine is pleased to announce that **Raymond G. Nemer, MD**, of Gregory, has been selected as the 1995 recipient of the Edward J. Batt, MD Memorial Award. This award is presented each year to a faculty member in the Department of Family Medicine for outstanding teaching for the school. Dr Nemer is Clinical Associate Professor in the Department of Family Medicine and has been practicing in his hometown of Gregory for more than 30 years. He offered one of nine original Senior Rural Family Medicine Clerkships in 1976. Since then he has had nearly 75 USDSM students participate in Gregory based clerkships.

The staff of past and present at the Veterans Administration Medical Center of Hot Springs celebrated **Dr. Roger P. Millea's** 35 years of service to the veterans. Dr Millea's first surgical case at the VAMC was documented on Aug. 8, 1960. Since that time, he has performed over 2,500 total cases and sees an average of 1,000 outpatients each year. He has provided exceptional service to this area with the greatest compassion and dedication to his patients. He has willingly educated his medical colleagues in both medicine and humor and the staff thanks him for his years of service.

Allan L. Dewald, MD, of Rapid City, has been named as a fellow of the American College of Radiology (ACR). Selected for his outstanding contributions to the field of radiology, Dr Dewald was named as one of 130 new fellows by the College's Board of Chancellors. Fellowships in the College are awarded to members for significant scientific or clinical research in the field of radiology or significant contributions to its literature. Criteria for selection also include performance of outstanding service as a teacher of radiology, service to organized medicine and an outstanding reputation as a result of long-term superior service.

Drs Ben Henderson, of Mobridge and **Michael McHale**, of Sioux Falls, have been elected a Fellow of the American College of Physicians (ACP), the professional organization of internists. Fellow of ACP is an honorary title recognizing achievements in internal medicine, the specialty of adult and adolescent medical care. To qualify as a Fellow of ACP, candidates are recommended by their peers, endorsed by the local ACP Governor and reviewed by ACP's credentials subcommittee.

Dileep Bhat, MD, specialist in genito-urinary surgery in Mitchell, has been notified by the American Urological Association, Office of Education, that he has

successfully completed the program on Injectable Therapy. This completion awarded to Dr Bhat certifies him to include the injection of Collagen Implants in the treatment for urinary incontinence. Dr Bhat is certified by the American Board of Urology and is a Fellow of the American College of Surgeons.

Dr Joseph Kass was honored for 35 years of service to Rosholt and the surrounding area. Dr Kass was born in Budapest, Hungary. He attended medical school in Hungary, graduating in 1952. In 1956, he left Hungary for Canada. He practiced in Canada for several years. In 1959, two men from Rosholt met with him and recruited him to come to Rosholt to practice; he moved to Rosholt, in October 1960, after retaking exams to obtain a South Dakota medical license.

Dennis G. Leland, MD, of Mitchell, was certified in advanced trauma life support and in skilled teaching and educational presentations. The goals of the course are to assess the patient's condition rapidly and accurately, resuscitate and stabilize the patient on a priority basis, determine if the patient's needs will exceed the facility's capabilities, arrange for the patient's inter hospital transfer, and assure the patient optimum care. He is certified by the American Board of Surgery.

Drs Kevin Bjordahl, of Webster; **Warren Golliher**, of Spearfish; **Steve Schroeder** and **Kathy Wimmer**, of Miller and **Gary Van Ert**, of Chamberlain have all completed continuing medical education requirements to retain active membership in the American Academy of Family Physicians, the national association of family doctors. AAFP members are required to complete a minimum of 150 hours accredited continuing medical study every three years.

K. Alan Kelts, MD, a neurologist practicing in Rapid City, received the Distinguished Service Award from the Association for the South Dakota State Speech, Language and Hearing Association.

Joel Huber, MD, of Miller, has been recertified in Advanced Cardiac Life Support (ACLS) by the American Heart Association. Dr Huber was also recertified in Advance Trauma Life Support.

Richard I. Porter, MD, Fort Meade Veterans Health Clinic, Camp Rapid, Rapid City, SD, recently

completed 69 hours of continuing medical education in an Intensive Review of Internal Medicine from Harvard Medical School, Boston, MA.

Dr Brooks Ranney retired from practice October 1, 1995. He joined the Yankton Clinic, 47 years ago, on October 1, 1948, specializing in obstetrics and gynecology. Since that time, he has delivered more than 7,000 babies, and provided primary care and special medical and operative care for thousands of women. He was Professor and Chairman of the Dept of Obstetrics and Gynecology at the Medical School. He served as department chairman for 25 years, and has continued to teach since that time. In 1955, Dr Ranney founded the Residency Training Program in Obstetrics and Gynecology at Sacred Heart Hospital and affiliated Indian Hospitals. He continued as director of the program until 1982.

In 1952, Dr Ranney was a founding member of the SD Society of Obstetricians and Gynecologists; he was a founding member of the South Dakota Maternal Morality study Committee and founding Fellow of the American College of Obstetricians and Gynecologists. He has been very active in medical and civic organizations over the years.

Finding ways to control health care costs without sacrificing quality health care is the goal of a newly formed task force appointed by Governor Janklow. South Dakota State Medical Association's (SDSMA) president **Dr Mary Carpenter**, Winner, and SDSMA Vice President, **Dr Jim Engelbrecht**, of Rapid City, have been appointed to represent SDSMA. **Thomas Krafka, MD**, from Rapid City, represents the Health Care Advisor Council and SDSMA/DakotaCare's CEO, **Bob Johnson**, represents DakotaCare.

G. Robert Bartron, MD, long time Watertown physician and surgeon, recently celebrated 50 years of practicing in Watertown. He graduated from the Watertown High School in 1938. After earning his medical degree in 1944 from Northwestern University and completing his internship at the Cook County Hospital in Chicago in 1945, and surgical residency in 1946, he returned to Watertown to join his father in the practice of medicine and surgery.

Dr William O. Rossing received the Laureate Award from the South Dakota Chapter of the American College of Physicians in Sioux Falls. Dr Rossing, a Garretson native, has practiced internal medicine in Sioux Falls for 30 years. The Award recognizes prominent specialists in internal medicine and those

who have demonstrated, by example and conduct, a commitment of excellence in medical care, education, research and service to their community, chapter and the college.

Dr John Barker, governor of the chapter, says "Dr Rossing is known throughout South Dakota as an internist's internist. He is an outstanding role model for how general internal medicine should be practiced in the community."

Carole J. Buchholz, MD, was recently elected as vice president of the South Dakota State Chapter of the American Academy of Pediatrics. She has served as state secretary-treasurer for the state chapter since 1987. "The South Dakota State Chapter of pediatricians is committed to the attainment of optimal physical, mental, and social health for all infants, children, adolescents and young adults throughout the state. Dr Buchholz said "The purpose of the American Academy of Pediatrics has always been to remind the world that children are our most enduring and vulnerable legacy."

Terry Altstiel, MD, general surgeon, was recently elected president of the South Dakota Chapter of the American College of Surgeons at the chapter's annual meeting. Dr Altstiel, a South Dakota native, started practicing in South Dakota, in 1981, after receiving his MD degree from the USD School of Medicine in 1980. He practices in both Sturgis and Spearfish.

Founded in 1913, the American College of Surgeons is an educational and scientific organization that was established to raise the standards of surgical practice and to improve the care of the surgical patient. The college is dedicated to the ethical and competent practice of surgery.

New Physicians

The following physicians recently began practicing medicine in South Dakota.

Michael N. Becker, MD Professional Arts Building 530 Iowa SE, Suite 105 Huron, SD 57350	OBG	Scott E. Rand, MD Olson Medical Clinic 20 S Plum Vermillion, SD 57069	FP
James D. Bowman, MD Univeristy Physicians 3625 Fifth St Rapid City, SD 57701	IM	John Shelso, MD SD Childrens Specialty Clinics 1100 S Euclid Sioux Falls, SD 57117	END
Kevin Bray, MD 1104 W Eighth St Yankton, SD 57078	OBG	David A. Strand, MD Dakota Surgical 911 E 20th St, #800 Sioux Falls, SD 57105	S
Spencer A. Brown, MD SD Childrens Specialty Clinics 1100 S Euclid Ave Sioux Falls, SD 57117	P	Gregory L. Wiedel, MD Tschetter-Hohm Clinic, PC 455 Kansas, SE Huron, SD 57350	IM
Theresa M. Campbell, MD Dakota Family Practice 2200 N Kimball Mitchell, SD 57301	FP	Kimberly Woolhiser, MD University Physicians 1400 W 22nd St Sioux Falls, SD 57105	IM
Patrick J. Collison, MD 1104 W Eighth St Yankton, SD 57078	OTO	Daniel J. Wunder, MD Queen of Peace Hospital 525 N Foster Mitchell, SD 57301	VR
Kerry L. Greenwood, MD 1104 W Eighth St Yankton, SD 57078	IM/NEP		
Barry LaBine, MD Rapid City Medical Center PO Box 6020 Rapid City, SD 57709	D		
Alan Lawrence, MD Brown Clinic 400 22nd Ave Brookings, SD 57006	S		
Caroline Lundell, MD St Luke's Midland Hospital 1314 S Eighth St Aberdeen, SD 57401	R		
Mary Morris, MD Redfield Clinic 1010 W First St Redfield, SD 57469	FP		

Directory of this Month's Advertisers

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THE SOUTH DAKOTA JOURNAL OF MEDICINE thanks these companies for advertising in this Journal.

Correspondence

Dear Dr Freeman:

Your editorial prompted me to remember a case at Grady Hospital back in 1975 or so. In that matriarchal society of inner city Atlanta, one 60 year old grandmatriarch came in one Sunday with an obvious pseudoseizure flailing all 4 extremities in a chaotic semipurposeful manner. She was surrounded by her clan.

Obviously this would not require a hospitalization or an extensive workup which pleased me. I still had the problem of the family and the patient in ER however.

After examining her carefully and doing a neurologic exam and making sure no other basic organic problems existed, I leaned down to listen to her respiratory rate in front of the family and quietly whispered in her ear. I said that I knew this was a falsified seizure and that I wouldn't say anything to her family if the seizure would simply stop and we could send her home.

No one heard that but her and I noticed then that the pseudoseizure movement resolved. I prescribed some Amitriptyline and sent her off to come back to my office at a later date. The family and my patient left satisfied.

I didn't think hard about this experience at the time since I was so glad to resolve another one of the many problems facing me that day in the busy emergency

room. But, your interesting editorial gave my memory a jog and I thought it would be worth sharing with you.

Sincerely yours,
Richard P. Holm, MD
Brookings, SD

Dear Editor:

I am working on a book on medical ethics and would like to enlist the help of other physicians to answer this question: Have you ever faced an ethical dilemma, and if so, how did you resolve it?

I am interested in all aspects of medical ethics-human experimentation, ethics of reproductive technology, abortion, medical treatment of the uninsured and poor, malpractice, physician assisted suicide, the right-to-die (why some doctors do not honor Living Wills), genetic counseling, genetic manipulation, euthanasia, kidney, lung and heart transplant, use of fetal tissue, or any other situation concerning an ethical dilemma.

Please reply to:

Claude A. Frazier, MD
4C Doctors Park
Ashville, NC 28801

South Dakota Society Of Pathologists



Organized Medical Staff Section

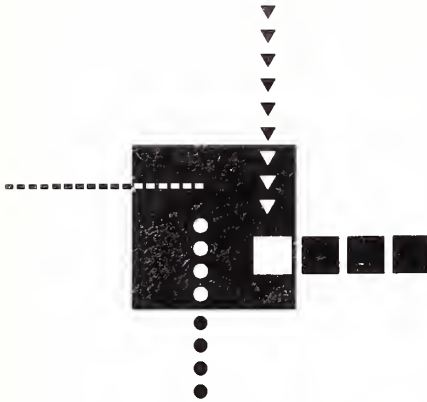
Twenty Sixth Assembly Meeting

November 30–December 4, 1995

Washington Hilton and Towers Hotel

Washington, DC

Send an AMA member physician representative from your hospital or health care delivery system to the 1995 Interim American Medical Association Organized Medical Staff Section (AMA-OMSS) Assembly Meeting to be held November 30 - December 4, 1995 in Washington, DC. Don't pass up this opportunity to participate in AMA's policy-making process and make a difference in the way your representative organization responds to managed care and other important issues facing today's physician. You can also gain valuable knowledge and make useful contacts by attending OMSS educational programs and networking functions.



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- The changing environment and the value of self-governance;
- How to reengineer and improve medical staff functions and processes;
- The attributes of a successful self-governing physician organization (PO);
- The components of governance and resources needed to develop a community-based PO;
- What criteria should be utilized in making partnering decisions; and
- How to manage risk, respond to legal and logistical challenges, and raise capital.

For new insight into how to increase physician involvement in your community attend the AMA-OMSS Interim Assembly Education Program on Friday, December 1 from 2:30 pm to 5:30 pm in Washington, DC.

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For more information please call **800 AMA-3211** and ask for the AMA's Department of Organized Medical Staff Services.

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JANUARY 11-12, 1996

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USD School of Medicine

GUEST SPEAKERS

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Joseph Cash, MD	Department of Rheumatic & Immunologic Disease, Cleveland Clinic, Foundation, Cleveland, OH
John Klippel, MD	National Institute of Arthritis & Musculoskeletal and Skin Diseases, Bethesda, MD

Contact:
Barb Wagley, Registrar
USD School of Medicine
Phone: (605) 357-1340

CME Conferences

CME Conferences being held on a regular basis at various health care facilities throughout the state of South Dakota.
(1 hour AMA Category credit available unless otherwise specified)

CME CONFERENCES

OCTOBER 1995

- October 17 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- October 17 **Tumor Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351, Ext. 313.
- October 18 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Clinical Pathology Conference, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- October 18 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, to be announced, to be announced, Info: David Rossing, MD 331-3490.
- October 19 **Geriatric Forum** - 7:00 am, RDT Network Studio, Rapid City Regional Hospital, Speaker: Roger Knutson, MD; Topic: Geriatric Dermatology; Info: Med Staff Office - 341-8107.
- October 19 **Neuroscience Grand Rounds** - 8:00 am, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- October 19 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- October 19 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- October 19 **Cath Conference** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Alice Glirbas - 333-2766.
- October 20 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- October 20 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- October 23 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- October 25 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- October 25 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: Jerry Rosen, MD, Topic: Sleep Disordered Breathing in Children: Pathophysiology and Treatment, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- October 26 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- October 26 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- October 26 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- October 26 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- October 27 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- October 27 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- October 30-31 **PALS Provider** - McKennan Hospital, Sioux Falls; Info: Darcy Sherman-Justice, 339-8096.

NOVEMBER 1995

- November 1 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, to be announced, to be announced, Info: David Rossing, MD 331-3490.
- November 1 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: John Wallin, MD, Topic: Things Physicians do that Harm the Kidney, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- November 2 **West River Internal Medicine Grand Rounds** - 2:00 pm, Hot Springs VA Hospital, Speaker: Robert Raszkowski, MD, Topic: G.I., Info: Dr. Donald Humphreys - 357-1340 (Kris Karbo).

- November 2 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- November 2 **Biomedical Ethics** - East Auditorium, Rapid City Regional Hospital, Info: Medical Staff Office - 341-8705.
- November 2 **Clinical Pathology Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: to be announced, Topic: to be announced, Info: Dr's J. Ruggles & R. Thompson, 665-9002.
- November 2 **Cath Conference** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Alice Glirbas - 333-2766.
- November 2 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- November 3 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- November 3 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- November 3 **West River Internal Medicine Grand Rounds** - 11:00 am, Fort Meade VA Hospital, Speaker: Robert Raszkowski, MD, Topic: G.I., Info: Dr. Donald Humphreys - 357-1340 (Kris Karbo).
- November 8 **Dermatopathology Conference** - 7:30 am, SVH Pathology Conference Room 1513 Info: Joan - 333-1730.
- November 8 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: John T. Sinnott, IV, MD, Topic: Update on CMV in Renal Transplantation, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- November 8 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- November 9 **Cardiac Cath Conference** - 7:30 a.m., McKennan Hospital Auditorium, Info: Cardiopulmonary Dept, 339-8171.
- November 9 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- November 9 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- November 9 **Internal Medicine, Tumor Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: To be announced, Topic: To be announced, Info: Dr. J. Ruggles & Dr. R. Thompson, 665-9002.
- November 9 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- November 10 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- November 10 **NALS Certification** - 8:00 am to 5:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351, Ext. 313.
- November 13 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- November 14 **Breast Cancer Conference** - 12:00 noon, Meeting Room B, Sioux Valley Hospital, Info: Dr. Thomas Cink - 333-5244.
- November 15 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Clinical Pathology Conference, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- November 15 **CPR Certification/Recertification** - 7-10:00 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351, Ext. 313.
- November 15 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Chris Wilbers, MD; Derm Topic; Info: David Rossing, MD 331-3490.
- November 16 **Geriatric Forum** - 7:00 am, RDT Network Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- November 16 **Cath Conference** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Alice Glirbas - 333-2766.
- November 16 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- November 16 **Neuroscience Grand Rounds** - 8:00 am, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- November 16 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- November 17 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- November 17 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.

- November 21 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- November 22 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: Dr. Luann Eidsness and Dr. Jeromem Freeman, Topic: Pain Management, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- November 22 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- November 23 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- November 23 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- November 23 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- November 24 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- November 27 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- November 29 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: Richard Barth, MD, Topic: New Advances in Diabetes Treatments, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- November 30 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- November 30 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- Nov 30 & Dec 1 **ALSO Course** - McKennan Hospital, Sioux Falls, SD; Info: Darcy Sherman-Justice, 339-8096.

MISCELLANEOUS

NOVEMBER 1995

- November 2-4 **National Conference on Colorectal Cancer**, Chicago Marriott Hotel, Chicago, IL. Fee: \$300. 16 hrs AMA Category 1 credit. Contact: Andy Cannon, Dir, Public & Provider Outreach, American Cancer Soc, 1599 Clifton Rd, NE, Atlanta, GA 30329. Phone: (404) 329-7606.
- November 3-4 **Rupert B. Turnbull Memorial Lectureship**, Heifetz Library and Steinberg Amphitheater, The Jewish Hosp, St. Louis, MO. 7.5 hrs AMA Category 1 credit. Contact: CME, Washington Univ School of Med, Campus Box 8063, 660 S Euclid Ave, St. Louis, MO 63110. Phone: 800-325-9862
- November 9-10 **21st Annual Symposium on Obstetrics & Gynecology**, Washington Univ Medical Ctr, St. Louis, MO. Fee: \$250. 13.5 hrs AMA Category 1 credit. Contact: Off of CME, Washington Univ School of Med, Campus Box 8063, 660 S Euclid Ave, St. Louis, MO 63110. Phone: 800-325-9862.
- November 9-10 **Changing General Surgical Practices, 1995**, St. Paul-Ramsey Med Ctr, St. Paul, MN. 13 hrs AMA Category 1 credit. Contact: CME, St. Paul-Ramsey Medical Center, 640 Jackson St, St. Paul, MN 55101. Phone: (612) 221-3992.
- November 16-18 **Strategies in Primary Care Medicine**, Holiday Inn East, St. Paul, MN. Fee: \$275. 16 hrs AMA Category 1 credit. Contact: CME, St. Paul-Ramsey Medical Center, 640 Jackson St, St. Paul, MN 55101. Phone: (612) 221-3992.
- November 18 **Gastroenterology Update**, Marriott Hotel, Omaha, NE. AMA Category 1 credit avail. Contact: Sally C. O'Neill, Ph.D, Assoc Dean, Creighton Univ CME Div, 601 N 30th St, Suite #2130, Omaha, NE 68131. Phone: 800-548-2633.

DECEMBER 1995

- December 1 **Family Practice Update**, Mall of America Grand Hotel, Bloomington, MN. AMA Category 1 credit avail. Contact: Hennepin County Med Ctr, 701 Park Ave, Mail Code 869A, Minneapolis, MN 55415.
- December 1 **Women's Healthcare Issues**, Washington Univ School of Med, St. Louis, MO. AMA Category 1 avail. Contact: Off of CME, Washington Univ School of Med, Campus Box 8063, 660 S Euclid Ave, St. Louis, MO 63110. Phone: (800) 325-9862.
- December 7-8 **Annual Cardiopulmonary Medicine Update**, St. Paul-Ramsey Med Ctr, St. Paul, MN. 16 hrs AMA Category 1 credit. Contact: CME, St. Paul-Ramsey Med Ctr, 640 Jackson St, St. Paul, MN 55101. Phone: (612) 221-3992.
- December 7-10 **Obstetrics and Gynecology Conference**, Bally's, Las Vegas, NV. Fee: \$295. AMA Category 1 credit avail. Contact: Center for Cont Educ, Univ of Neb Med Ctr, 600 S 42nd St, Box 985651, Omaha, NE 68198. Phone: (800) 642-1095.
- December 9 **Contemporary Management of Myocardial Infarction**, Washington Univ School of Med, St. Louis, MO. AMA Category 1 avail. Contact: Off of CME, Washington Univ School of Med, Campus Box 8063, 660 S Euclid Ave, St. Louis, MO 63110. Phone: (800) 325-9862.



Susan Tjarks, President, South Dakota
State Medical Association Alliance

Turn It Off!!!

Today, I happened to walk into the living room where the TV had been left on. Immediately, I recognized the program airing as one that I had consistently watched when I was a young girl. The show was "Little House on the Prairie". I remember that Mom always had dinner ready early that night so that we could all sit down as a family and watch this program together. So often, the plot was extremely touching and my mom and sisters and I would sit around with tears flowing down our cheeks while my brothers and dad would chide us. But it was no secret that they were only laughing to try to hide the lump that kept rising in their throats, as well.

Today I didn't turn off the TV as I had intended to do as I entered the room. Instead, I sat down and watched the story unfold of Laura Ingalls as she befriended an old man who was mourning the death of his beloved wife. Laura brought her copy of the Bible to the man and had him read several verses from it so that he would know that his bride was in heaven and one day he would see her again.

I compared this program to the likes of those that grace our television screens today. I considered such programs as "Homicide", "NYPD Blues", and "Mighty Morphin Power Rangers" and realized just how far we have come from those days of "Little House on the Prairie" and "The Waltons". It frightened me as I contemplated the role that television plays in today's society. Sadly, it has become, in many cases, the new

substitute for parents. And unfortunately it is teaching our children all of the wrong things about sex, violence, alcohol, and drugs. Our children are going home to the one place in the world where they should be truly safe from the evils of the world only to turn on the television where sex and violence run rampant.

There should be no question in anyone's mind about the direct correlation that exists between what our children hear and see on television and how they behave. Now don't misunderstand me. I realize that there are dozens of things that contribute to violence. But reports conducted by such organizations as the AMA, the American Academy of Pediatrics, and the National Academy of Science consistently show that mass media is one of the factors that **contributes** to violence. In fact, studies show that early exposure to media violence contributes about 10% to adult aggressive behavior. This is significant when you realize that there are countless other factors that contribute to adult aggressive behavior and this one **alone** accounts for 10%.* The situation is even more frightening when you consider that that exposure to violence is expanding at an alarming rate as our children become familiar with the modern technology, including the Internet, video games like Mortal Kombat, and cable. Think of the movies that have been made recently that have direct appeal to the younger generation such as Jurassic Park, Batman Forever or even Home Alone. Movies such as these only serve to increase our children's appetite for violence. They start to search it out. Never has it been shown that viewing violence in the media reduces violent behavior. Just the opposite is true.

I am pleased to hear of legislation requiring a V-chip to be placed in all new televisions which will allow parents to screen out violent programming from their homes. But these will only be effective as far as the people who are rating programs do so appropriately. And as I understand it, there will be no way of requiring cable stations to rate their programs unless they choose to do so. The other problem comes from deciding who gets to determine how much violence is too much violence. I think there will be as many opinions on that one as there are people on the committee.

The Medical Alliance strongly endorses a stricter rating system on all forms of mass media including movies, video games, and music, and encourages all parents to become more aware of what their children are viewing. We must all engage in this battle of protecting our children from the violence that permeates our society. This must begin in the home. Please join with the AMA and AMA Alliance as we continue our fight to "Stop America's Violence Everywhere". We must do it for our children. We must do it for our future.

Susan Tjarks

*Quoted from Ed Donnerstein, Ph.D, "Media and Violence"

New SDSMA Members

Physicians, medical students and residents who have recently joined the South Dakota State Medical Association.

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There He Goes Again!

It is that time of year for my pitch about becoming involved in legislative action on a local, state and federal level.

I always have to start by recognizing the fact that there are certain few physicians, such as the past and recent officers of our South Dakota State Medical Association, who have devoted remarkable amounts of time and energy over many years on our behalf. I want to thank them for their efforts. This message is not for them, however, but for the majority of the rest of us whom I believe can accomplish a lot with some concentrated effort.

I should hardly have to mention that at no time I can remember, since the Medicare law was being debated in the early 1960's, have we been on the eve of such great changes. Not only will the federal changes in Medicare and possible turnover of Medicaid to the states change reimbursement, but also our entire manner and ability to make appropriate decisions for patients is being challenged and curtailed.

What can we do? Most practicing physicians know legislators as friends and patients. It is important to use this relationship to make our views known. I believe we have to do this not just during legislative sessions but before and after them, preferably all year round.

Some of us ask how can we be effective? Attending meetings such as "Constituent Skills" workshop sponsored by the South Dakota State Medical Association and South Dakota Medical Group Management Association in Chamberlain on Friday, November 17, 1995, is one way to start. Learning how to be a key contact person with a legislator and which candidates have taken favorable and unfavorable positions on issues affecting medicine will be discussed.

In order to have meaningful impact, we have to know what legislation is being proposed. The Grab Bag keeps us informed but we have to be able to understand enough about the area we are discussing to be able to defend our position when confronted with the opposing arguments. We must stand together and be aware of what tact and position the lobbyists for the SDSMA are taking.

What are some of the important issues we know so far? The Commission on Legislation and Relations recommended to the Council that SDSMA introduce legislation in the 1996 session in regard to a limitation on non-economic damages for medical malpractice actions. There is a State Supreme Court action pending which may significantly influence the content of such legislation. Whether that decision will occur before the end of the year is unknown. It would behoove all of us to keep a close eye on this area.

Of immense interest (as suggested above) to all of us are further developments in the state administration of Medicaid. Protection of medical decision making and adequate reimbursement is crucial.

The chiropractors are proposing to perform high school athletic physical examinations as they have for many years. Telling your legislator your position on this giving substantial reasons is critical.

Lastly, the impact of managed care is changing all of our practices. Legislation such as any willing provider or instituting point of service is controversial among members of the medical profession. However, I believe we must be careful to voice as uniform and as informed an opinion as possible to our representatives in Pierre. Otherwise, our impact on this important issue will be blunted and none of us may be happy with the outcome. Have a good holiday season. It is going to be an interesting beginning of the New Year in 1996.

J. F. Barlow, MD,
Editor

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Insuring Healthcare Personnel and Their Facilities

Treatment of Migraine During Pregnancy and Lactation

Carol B. Miles, MD

ABSTRACT

Migraine onset, frequency and severity are influenced by hormonal changes throughout the various female reproductive life events, including pregnancy. Migraine may worsen during the first trimester, but usually improves thereafter. The treatment of migraine during pregnancy and lactation is difficult because of the risks to the fetus and newborn. This paper reviews migraine throughout the female reproductive life events, as well as the acute and prophylactic treatment of the pregnant and lactating migraineur.

There is a difference in the prevalence of migraine between adult males and females, with the females clearly being at greater risk. The prevalence among fertile women is 19%.¹ Migraine attack rate rises from 1:1 in children to 3:1 in favor of the female after puberty.² This provides strong evidence that female hormones play a role in migraine. Migraine in women is influenced by hormonal changes throughout the reproductive life cycle including menarche, menstruation, pregnancy and menopause. This is evidenced by the change in frequency and severity of migraine attacks.

Estrogen plays a strong role in the pathogenesis of migraine. It increases the synthesis of prostaglandins, which sensitize nociceptors. This alone can cause headache, and it also promotes the development of neurogenic inflammation which leads to headache. Neurogenic inflammation is caused by the leakage of plasma proteins from dural vessels. The prostaglandins also act to increase the release of serotonin, which increases neurogenic inflammation and causes vasodilatation of blood vessels within the meninges.

MIGRAINE AND FEMALE REPRODUCTIVE LIFE EVENTS

There is a concentration of onset of migraine at menarche. This is likely secondary to the hormonal events that occur during this time. Epstein et al³ found a concentration of 18.3% and Granella et al⁴ found that migraine started at menarche in 10.7% of female migraineurs.

Migraine can occur perimenstrually and/or at the time of ovulation. Granella et al⁴ found that in 60% of cases the migraine attacks occurred in the

perimenstrual period, which included the 3 days before through the 3 days after menstruation. Somerville et al⁵ found that the headache of menstrual migraine occurred during or after the simultaneous fall of estrogen and progesterone in women predisposed to menstrual migraine. When given premenstrually, estrogen delayed the onset of migraine but not menstruation.⁵ He also found that progesterone administration delayed menstruation but did not prevent the migraine attack.⁶ Therefore the primary trigger of menstrual migraine appears to be the withdrawal of estrogen rather than progesterone. Hormonal therapy for menstrual migraine, by maintaining high estrogen levels during the menstrual epoch, is able to prevent migraine attacks with significant success.⁷ However high estrogen levels prevent migraine only if they are stable.⁸ Migraine does occur once the hormone is metabolized and the estrogen levels fall.

It is interesting to note that consistent sex hormone differences have not been found in women with and without migraine. Menstrually related migraine is more frequent, however, in married and less educated women.⁴ In this view, the pathogenic mechanisms of menstrual migraine are not only related to the endocrine milieu, but also to the complex interactions between hormonal and environmental factors.

The relationship between headaches and oral contraceptive pills (OCs) has been known for several years.⁹⁻¹² OCPs may induce, exacerbate, or alleviate headaches. In one study⁴ 2.5% of the patients had new-onset migraines, 24.1% had worsening and 7.7% improved. Established migraineurs show a trend toward an increased incidence of attack during the drug-free interval of the cycle,¹⁰ while patients with new

onset vascular headache during OCP use tend to have migraines randomly throughout the cycle.¹¹ A family history of migraine in new-onset migraineurs on OCP is less evident than that for migraine at onset prior to taking the OCP.² The increased incidence of migraine in patients on either OCPs or estrogen supplementation may be secondary to unstable estrogen levels.

Migraine frequently begins, or changes frequency, during pregnancy. In Granellas study⁴ of 1300 migraine sufferers, 1.3% began having migraine headaches during pregnancy. In this same study he found that 67.3% of cases improved during pregnancy (17.4% with complete remission and 49.9% with significant improvement). In this same study, 29.2% had no change and 3.5% worsened. Other authors¹³⁻¹⁶ have shown similar rates of improvement (50%-69%) and similar rates for unchanged or worsened (14%-42%). When migraine develops for the first time during pregnancy, it usually does so in the first trimester.² Migraine may worsen in the first trimester of pregnancy and many women are headache-free during the second and third trimester. The relief of migraine during pregnancy can be explained by high estrogen levels and the lack of hormonal fluctuations, as well as *b*-endorphins that increase in pregnancy.

Epstein et al³ also note that the patients who presented with migraine onset at the time of menarche were more likely to have menstrually related migraine and to have relief of their migraine during pregnancy. Granella et al⁴ found that 36.4% of patients whose migraine started at menarche had remission of their migraine attacks during pregnancy, compared to 13.9% remission in patients whose migraines were not related to menarche. In Lance's study¹³ 64% of women who had menstrually related headache had relief during pregnancy compared to 48% in those who did not have menstrually related headaches. Boussers¹⁶ results are 86% and 60% respectively.

Migraineurs have no increased risk of complications during pregnancy and their children have no increased incidence of birth defects. Wainscott¹⁷ reviewed the reproductive histories of 777 women suffering from migraine and compared them to 182 nonmigrainous controls. The incidence of miscarriage, toxemia, congenital anomalies and stillbirth was not increased in the migraine patients compared to the national averages or controls.

Headaches occur frequently in the postpartum period, particularly in known migraineurs. In a study by Stein¹⁸ 15 out of 40 women (37%) on a postnatal ward had headaches in the first post partum week, particularly between days 3 and 6. The incidence was increased among women with a previous personal or family history of migraine or pre-menstrual migraine (64%). They were usually milder and more often bilateral than the patients usual migraine. Even though the estrogen level falls rapidly during the puerperium, the level is still elevated. This may be a possible modifying influence on the severity of the headache. The rapidly falling levels of estrogen and progesterone, or

possible alterations in serotonin metabolism, are presumed to be responsible for the development of headaches during this time period.

Menopause is associated with low sex steroid hormone levels and elevated gonadotropin levels. Although migraine usually decreases with increasing age, migraine can either regress or worsen at menopause. Hormonal replacement with estrogen, alone or in combination with progestin, is often used to treat menopausal symptoms and to prevent osteoporosis. This estrogen therapy can exacerbate or relieve migraine. Changing the form of estrogen may help with migraine management.

TREATMENT IN PREGNANCY

Until the middle of this century most physicians believed that the uterus served as a protected environment for the fetus and provided a barricade against harm from the external environment.¹⁹ This concept was questioned when it was observed that women who contracted rubella during the first trimester frequently gave birth to infants with defects of the heart, eyes, and ears.¹⁹ The Thalidomide catastrophe raised the concern about the safety of foreign compounds on the fetus. Any drug or chemical administered to the mother is able to cross the placenta to some extent unless it is destroyed or altered during passage.¹⁹

The major consideration in the management of the pregnant migraineur is the effects of medication and migraine itself on the fetus. As the migraine usually improves after the first trimester, the best course may be for the patient to bear the discomfort, or use conservative treatment. Nonpharmacologic measures such as reassurance, rest, stress management, ice, massage, and biofeedback should be attempted first. Avoidance of dietary constituents that trigger attacks is also important. All drugs should be avoided unless frequency and/or severity of attacks become life threatening to the mother or fetus. If the headaches are severe and intractable, with associated nausea, vomiting, and dehydration, then other measures may be necessary. Fluid replacement alone should be attempted first. Medication for acute, and possibly prophylactic, therapy may be warranted if dehydration is severe and the headache particularly incapacitating. Prophylactic medications should only be used when the frequency and severity of migraine are incapacitating, and when nausea and vomiting are risking the health of the fetus. These should be used as a last resort, and only with the consent of the patient and her partner.

While some drugs are believed to be relatively safe during pregnancy, drugs are tested in animals and teratogenic effects cannot always be extrapolated to humans. Thalidomide is an example of a medication which has no teratogenic effect in mice and rats but has a profound teratogenic effect in humans.²⁰ In addition to teratogenicity, death of the fetus, fetal growth abnormalities, perinatal effects, post-natal developmental abnormalities, delayed oncogenesis, and functional and behavioral changes can occur.²⁰ The classic teratogenic period in humans is a critical 6 week period

TABLE I

Drug Labeling in Pregnancy:²²

Category A:	Controlled studies show no risk. Adequate, well-controlled studies in pregnant women fail to demonstrate a risk to the fetus.
Category B:	No evidence of risk in humans. Either animal-reproduction studies have not demonstrated a fetal risk but there are no controlled studies in pregnant women, or animal-reproduction studies have shown an adverse effect (other than a decrease in fertility) that was not confirmed in controlled studies in women.
Category C:	Risk cannot be ruled out. Either studies in animals have revealed adverse effects on the fetus (teratogeni or embryocidal or other) and there are no controlled studies in women, or studies in women and animals are not available. Drugs should be given only if the potential benefit justifies the potential risk to the fetus.
Category D:	Positive evidence of risk. There is positive evidence of human fetal risk, but the benefits from use in pregnant women may be acceptable despite the risk.
Category X:	Contraindicated in pregnancy. Studies in animals or human beings have demonstrated fetal abnormalities, or there is evidence of fetal risk based on human experience, or both, and the risk of the use of the drug in pregnant women clearly outweighs any possible benefit.

between 31 days and 10 weeks from the last menstrual period.²¹ Early teratogenic effects cause anomalies such as congenital heart disease or neural tube defects and later exposure results in malformations of the palate or ear.²⁰ Prior to organogenesis, exposure has an all-or-none effect. Exposure near the time of conception or implantation may kill the conceptus, but if the pregnancy continues, there is no increased risk of congenital anomalies.²⁰ Drug exposure accounts for only 2%-3% of birth defects, while genetic defects cause 25% and the remainder of anomalies are of unknown causes.²⁰

Table I reviews the pregnancy ratings by the Food and Drug Administration. This is used to classify the drugs in Tables II and III, where a brief synopsis of acute and prophylactic medications are presented. To summarize this, acetaminophen, caffeine, nonsteroidal anti-inflammatory drug and butorphanol (in the first and second trimesters), and narcotics (except during labor) are relatively safe for acute therapy. Prophylactic treatment is not recommended, but when necessary, fluoxetine and prednisone are the safest choices.

BREASTFEEDING

At the present time in the US, more than 50% of babies discharged from the hospital are breast fed, and the number is increasing.¹⁹ It would be easiest to recommend that the nursing mother not be medicated, or conversely, that the medicated mother not nurse. It is, of course, likely that a mother in pain may not, or cannot, comply. It must be kept in mind that investigations concerning milk secretion and synthesis have been carried out in animals. There are considerable differences in the composition of milk in different species. These differences bring about differences in elimina-

TABLE II
DRUGS IN PREGNANCY AND LACTATION
ACUTE TREATMENT

Generic Medication	Risk Factor	Fetal Risk	Breast Feeding
Acetaminophen ¹⁹	B	safe for short term use	5
ASA ¹⁹	C/D*	chronic and intermittent high doses should be avoided	4
Butalbital ¹⁹	C/D	neonatal withdrawal	No data
Butorphanol ¹⁹	B/D	fetal addiction/withdrawal use during labor contraindicated	5
Caffeine ¹⁹	B	mod. consumption without measurable risk to fetus	5
Codeine ¹⁹	C/D	use during labor contraindicated neonatal addiction/withdrawal	5
Erotamine ¹⁹	D	should be avoided	1
Hydroxyzine ¹⁹	C	contraindicated early preg	No data
Ibuprofen ¹⁹	B/D	no reports congenital defects	5
Ketorolac ²³	C	no adequate studies	1
Meperidine ¹⁹	B/D	don't give during labor	5
Morphine ¹⁹	B/D	no congenital defects	5
Naproxen ¹⁹	B/D	should not be used late in 3rd trimester	5
Prochlorperazine ¹⁹	C	safe if taken occasionally @ low doses	5
Propoxyphene ¹⁹	C/D	some congenital abnormalities	5
Sumatriptan ²³	C	no adequate studies	No data

*When two letters are present, the second letter is the risk when used for prolonged periods or at high doses near term.

TABLE III
DRUGS IN PREGNANCY AND LACTATION
PROPHYLACTIC TREATMENT

Generic Med	Risk Factor	Fetal Risk	Breast Feeding
Amitriptyline ¹⁹	D	limb reduction anomalies/jaw abnormalities	3
Fluoxetine ¹⁹	B	no reports adverse fetal outcome	3
Lithium ¹⁹	D	avoid during pregnancy	1
Prednisone ¹⁹	B	small risk	5
Propranolol ¹⁹	C	not teratogenic/symptoms of beta blockade	5
Valproic acid ¹⁹	D	major/minor congenital abnormalities	5
Verapamil ¹⁹	C	no reports congenital defects	5

tion. An example of this includes the pH differences between cow and human milk.¹⁹ This is important as many studies on drug excretion have been studied in cows. The concentration of drugs in breast milk are dependent on concentration gradients, lipid solubility of the drug and its degree of ionization, as well as on binding to protein and other cellular constituents.¹⁹

Table IV presents the classification of drugs used during lactation, as developed by the American Academy of Pediatrics Committee on Drugs. During lactation, acetaminophen, butorphanol, caffeine, narcotics, nonsteroidal anti-inflammatory drugs, and prochlorperazine are the safest choices acutely. Prophylactic options may include beta-blockers, calcium channel blockers, Valproic acid and prednisone.

TABLE IV

**CLASSIFICATION OF DRUGS USED
DURING LACTATION:²⁴**

1. Contraindicated
2. Required temporary cessation of breast feeding
3. Effects unknown but may be of concern
4. Use with caution
5. Usually compatible

SUMMARY

Migraine is responsive to hormonal changes, including those experienced throughout pregnancy. Migraine usually improves after the first trimester, and this reassurance, as well as nonpharmacologic measures, should be attempted first. If medications are necessary during pregnancy, after careful consideration of the risks and benefits, use those that are in category A or B. Since many medications are transferred into breast milk, the risks and benefits again need to be weighed. If medications are considered necessary, use those in category 5. Since very few medications are without some potential risk to the fetus and newborn, it is important for the caregiver to explain the potential risks, and to obtain consent, from the patient and her partner.

AUTHOR

Dr Carol Miles, is a graduate of USD School of Medicine. She completed a neurology residency at the University of Vermont, and in August joined practice with Neurology Associates, Sioux Falls, SD.

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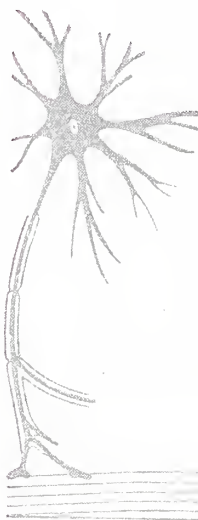
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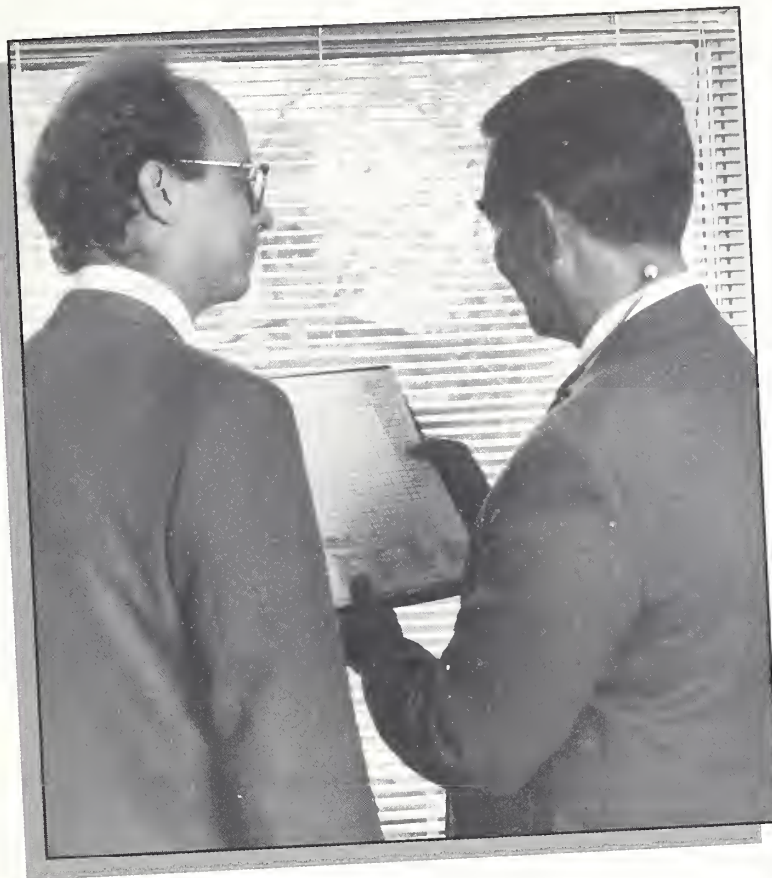
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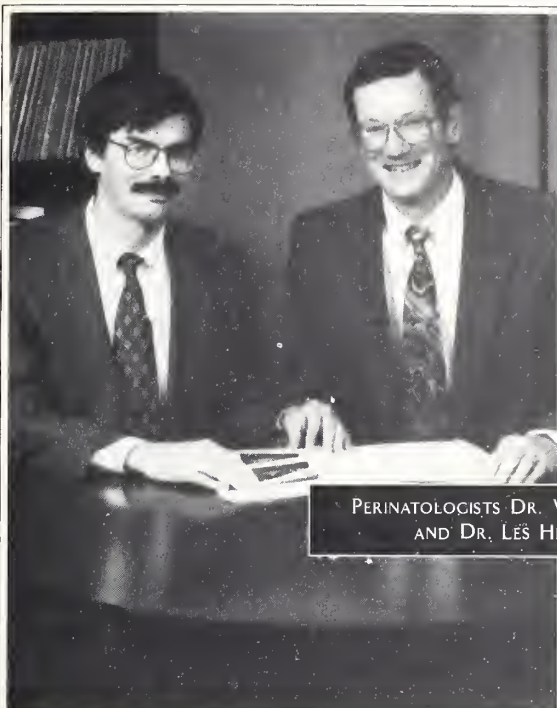
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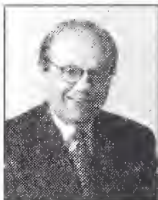
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Council Meeting Highlights

The Council met in Sioux Falls on Friday, September

22. Following are highlights from this meeting.

1. Dr. Steven Feeney was elected as the second counselor from the Watertown District.
2. The Young Physicians Section had proposed that SDSMA members provide high school athletic physicals at no charge to junior and senior high school students. The Council noted that some districts have established such a program and recommended that this be left up to the individual district medical societies.
3. The Council reviewed the report of the Commission on Legislation and Governmental Relations and took the following action for the 1996 legislative session.

SPONSORED LEGISLATION:

- a. Amend the current law regarding ECT to allow the use of ECT for both voluntary and committed patients with the consent of two physicians (eliminating the need for a judge's authorization).

ENDORSED LEGISLATION:

- a. Nutrition/Dietetics Practice Act
- b. Amend the disclosure law which would allow the State Health Department to provide the names of patients with diagnosed treatment resistant TB to South Dakota hospitals.

OPPOSED LEGISLATION:

- a. Allowing chiropractors to perform high school athletic physical exams (educational information will be provided to physicians to discuss this issue with their legislators).

OTHER LEGISLATION:

- a. The SDSMA will not support legislation mandating insurance coverage for port-wine stains but will support and assist members in being advocates for their patients in this and similar situations (this reaffirms previous SDSMA policy that we will not endorse insurance mandates).
- b. Tax reform for the state of South Dakota was discussed and the mission statement of the SDSMA was reviewed. It was determined that tax reform does not fall within the scope of the mission statement, and therefore the SDSMA will not take a position on this issue. Rather, physicians are encouraged to become knowledgeable and involved on an individual basis.
4. The SDSMA has been reapproved for CME accreditation and North Central Heart Institute was accredited for the first time.
5. The Council determined that a blanket registration fee would be in effect for the 1996 SDSMA annual meeting with two exceptions: physician spouses may purchase individual tickets for the Friday night banquet and Alliance members may purchase individual tickets for the Alliance luncheon. Also, a resolution will be drafted for the 1996 House of Delegates which would increase the annual dues proportionate to covering the annual meeting costs, thus eliminating the physician registration fees.
6. Dr. Tom Johnson of Brookings was appointed as the SDSMA representative to the U.S. Pharmacopoeial Convention, Inc. for a five year term.

The next meeting of the Council will be held on Friday, November 10, in Pierre, SD.



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Traditional heparin administration in the treatment of thromboembolic disorders such as deep vein thrombosis and pulmonary embolism has typically included a 5000 Unit bolus followed by an initial infusion rate of 1000 units per hour. Activated partial thromboplastin times (APTT) are measured and adjusted in increments of units per hour to maintain an APTT of 1.5 to 2.0 times the control value. Randomized clinical trials have established the need for adequate heparinization.^{1,2} It has been clearly demonstrated in the literature that there are increased heparin requirements in patients with thromboembolic disorders such as pulmonary embolism and venous thrombosis,^{3,4} and failure to achieve rapid anticoagulation by under dosing heparin leads to sub-optimal responses in resolution of thromboses.^{5,6}

Raschke et al, in a randomized controlled trial, compared the "standard" nomogram (5000 unit bolus and 1000 unit/hour infusion) to a new weight-based heparin protocol in the treatment of deep venous thrombosis, pulmonary embolism, and unstable angina.⁷ One hundred fifteen patients were randomized to receive either the "standard care" approach to therapy, or a weight-based regimen which included an 80 units per kilogram bolus followed by an initial infusion of 18 units/kilogram/hour. Outcome measures included time to exceed the therapeutic threshold, time to achieve a therapeutic range, bleeding complications and recurrent thromboembolism. Primary outcome measures (time to exceed minimum threshold and time to achieve a therapeutic range) supported the use of a weight-based approach over the "standard" nomogram ($P < 0.001$ for both). Recurrent thromboembolism occurred at a greater frequency in the standard care group. Ninety-seven percent of the patients treated with the weight-based protocol exceeded the minimum therapeutic threshold within twenty-four hours compared to only 77% in the standard care group.

Subsequent studies have provided additional support for the use of a weight-adjusted heparin protocol.⁸⁻¹⁰ For example, Kershaw et al, used a computer based model which incorporated a 70 units/kilogram bolus (100 units/kilogram for pulmonary embolism) and infusion rates ranging from 13 to 16 units/kilogram/hour. In this study Kershaw found that a computer-assisted weight based dosing method for heparin resulted in greater than 90% of subjects reaching a therapeutic APTT within 24 hours ($P < 0.001$) as compared to traditional dosing (62% at 24 hours). Furthermore, Gunnarsson et al, in a biphasal study of empiric versus nomogram-based heparin in cardiovascular patients found that a statistically significant

portion of patients who received a weight-based heparin regimen (75 units/kilogram bolus and 13 units/kilogram/hour initial infusion) had a reduction in the time required to achieve therapeutic anticoagulation. The National Heart, Lung and Blood Institute has also recommended the use of a weight-based heparin protocol in their Clinical Practice Guidelines for Unstable Angina 1994: Diagnosis and Treatment.

Weight-based heparin nomograms have been shown to prevent recurrent thromboembolism when compared to non-weight-based nomograms.⁷ Because the risk of recurrent thromboembolism is greatest within the first 24-48 hours¹¹ the need to provide a more rapid means of anticoagulation without an increase in bleeding complications becomes even more crucial since inadequate or subtherapeutic anticoagulation has clearly been associated with patency rates which are lower than those observed with therapeutic anticoagulation.^{12,13}

The trend is becoming quite clear. The use of a weight-adjusted protocol in the treatment of deep vein thrombosis, pulmonary embolism, and unstable angina deserves greater attention, and attempts to incorporate the use of these protocols should be initiated. The routine use of a weight-based heparin nomogram in other patient populations such as myocardial infarctions, intra coronary stents, percutaneous transluminal angiography, and angioplasty patients warrants further study.

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Edited by Brian Kaatz, Pharm.D.



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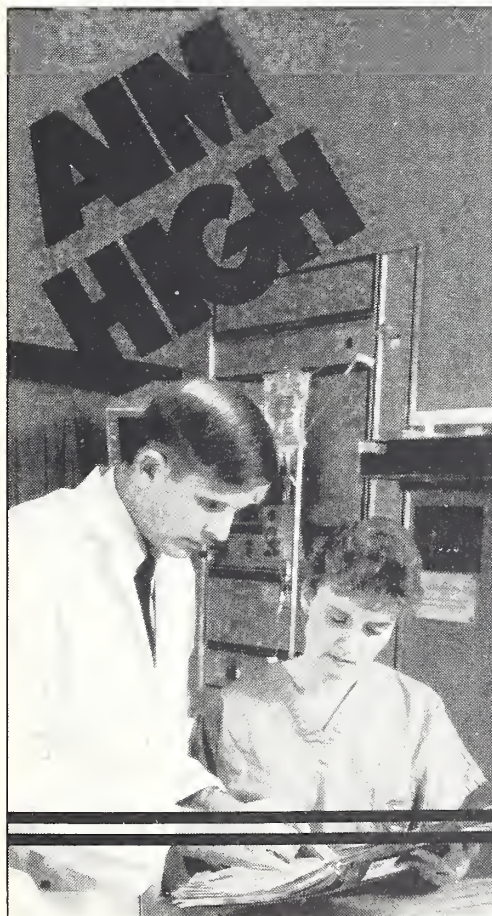


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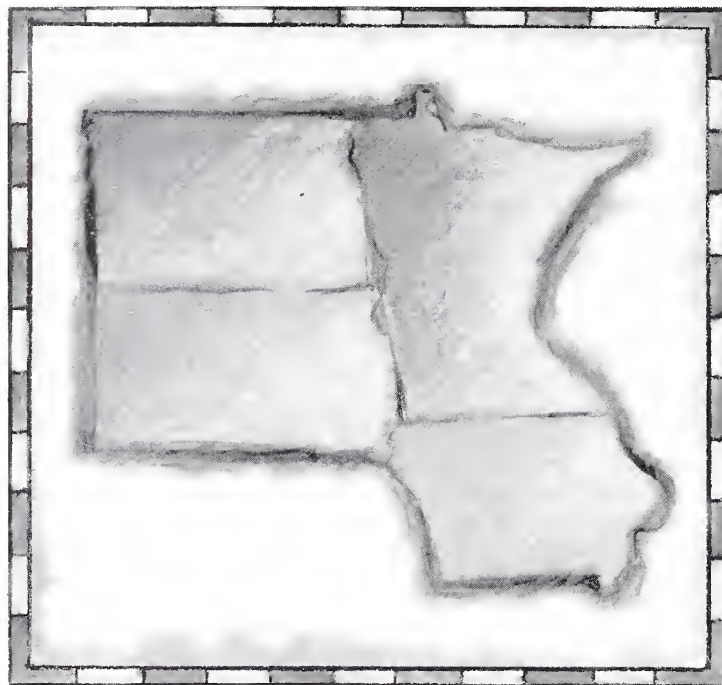
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From a Legal Perspective

Avoiding—And Defending—Allegations of Inappropriate Physician Conduct

Midwest Medical Insurance Company Risk Management Committee

Recent headlines have highlighted a growing trend in malpractice lawsuits, disciplinary actions, and criminal prosecutions—alleged sexual misconduct by physicians.

Sensational publicity, heightened concern about gender issues, and changing medical practices have created a climate in which every physician may be vulnerable to allegations of inappropriate conduct. Clinics, also, may be subject to lawsuits for the misconduct of their physicians. Increased sensitivity to the causes of the allegations is the best risk management for physicians to minimize their chances of becoming targets. Appropriate policies and good damage control are the keys to avoiding clinic liability.

Cases of Concern

The majority of the cases involve allegations of inappropriate breast, pelvic, or rectal examinations. According to Elizabeth Lincoln, MMIC Vice President of Risk Management, several different scenarios are presented by these cases.

First are cases in which the examination was for a bona fide diagnostic or treatment purpose and the physician had no inappropriate intentions. However, questions were raised about the propriety of the examination for such reasons as:

- the technique of examination was outdated or ineffective;
- the type of examination is not usually performed within the physician's specialty;
- examinations were performed at unnecessarily frequent intervals;
- the physician knew or should have known that another physician was following the patient's care in the areas of concern; or
- the examination did not otherwise fall within common practice patterns.

Second are cases in which everything about the examination was medically and ethically appropriate, but there was a breakdown in communication leading to a patient misunderstanding of the need for the examination or how it was conducted.

A third category involves "predatory" physicians, where the actions and intent of the physicians were, in fact, inappropriate. "Cases involving physicians who deliberately engage in sexual misconduct with patients are rare, but they do occur," says Ms Lincoln. "Our risk management goal for this type of case is to educate clinic administrators about how to identify problems and how to respond if a problem does arise."

A related type of situation in which sexual misconduct may be alleged is that in which physicians overstep professional boundaries and become involved in personal relationships with patients. When a relationship ends, the patients file malpractice cases or complaints with the medical licensing board.

Risk Management for Physicians—Respect; Communication; Documentation; Good Practice

Many risk management lessons in how to minimize the threat of allegations of inappropriate conduct can be learned from past lawsuits. Although they are simple recommendations for avoiding misunderstandings with patients and ensuring that the propriety of examinations is above question, they can be easily overlooked in the midst of a busy schedule.

- Respect the patient's privacy:
 - Knock before entering the exam room;
 - Provide a gown whenever the patient is asked to fully or partially disrobe;
 - Do not remain in the exam room while the patient is disrobing or re-dressing;
 - Do not assist the patient in removing clothing (If a patient is unable to undress him/herself, offer assistance from someone of the same sex as the patient.);
 - Allow the patient to regown or dress before discussing the findings of the examination, course of treatment, next visit, etc.
- Communicate fully the purpose of the examination and obtain the patient's consent before proceeding. This is especially critical if the purpose of the examination is not obvious to the patient from their presenting complaint. Explain what you are doing throughout the examination.
- Have an assistant of the same sex as the patient in the room whenever you believe there may be potential for the patient to misunderstand the purpose of an examination. Patients with whom an assistant may be advisable include:
 - Young patients who may not have previous experience with the type of examination necessary;
 - New patients with whom no relationship has been established;
 - Patients expressing particular concern about the examination;
 - Patients exhibiting any type of seductive behavior;
 - Patients with a history of sexual abuse;

- Patients raising "red flags" of any other sort.

An assistant should definitely be available for any patient who requests that another person be present in the exam room.

- Evaluate your techniques of performing examinations. Do they comply with accepted standards and practice patterns? Do your partners and other colleagues use the same methods? Do the examinations generally fall within your area of specialization?
- Document all examinations fully, including the reason for the exam.
- Be careful of overly casual comments or questions that may have sexual overtones and be misunderstood by the patient. If the questions are medically necessary, explain the reason they are being asked. For example, many patients do not realize that inquiry about birth control or sexual practices may be important for diagnostic or treatment purposes. Without explanation, they may be offended by the questions.
- Maintain appropriate professional boundaries with patients. What may be intended as simply a comforting hug by a physician may be perceived as an unwelcome advance by a patient who is unfamiliar with the physician's practice style.
- Carefully assess the propriety of personal involvements with patients. The AMA and many state medical associations have addressed the issue of when personal relationships with patients are — and are not — ethically appropriate.

Risk Management For Clinics — Good Policies; Quick Response; Legal Counsel

In addition to the lawsuits filed against physicians for inappropriate conduct, many malpractice suits also involve allegations against the physician's clinic for failure to supervise the physician, negligent employment, or failure to respond to patient complaints. These allegations are based on the theory that the clinic administration knew, or should have known, that the physician was engaging in inappropriate conduct.

A significant problem with these cases is that they often receive extensive publicity. Once one patient's claims of inappropriate conduct by a clinic physician hit the headlines, allegations by other patients frequently follow. The potential for clinic liability is most significant when there are multiple allegations against a single physician. Therefore, quick response to even a single complaint is vitally important. Prevention, early detection, and damage control are the keys. Administrators and medical directors should:

- Establish a written policy stating that inappropriate conduct with patients will not be tolerated, that complaints will be thoroughly investigated, and that appropriate disciplinary action will be imposed if a complaint is found to be valid.
- Ensure that the clinic has a formal, effective policy for the handling and resolution of patient com-

plaints. In the case of a complaint alleging sexual misconduct, the policy should require that the complaint be brought immediately to the attention of the administrator.

- Develop a clinic policy on the use of exam assistants. Policies vary widely. Some clinics require an assistant to be in the room whenever a physician is examining a patient of the opposite sex. Some require an assistant whenever a breast, pelvic or rectal exam is performed. Other clinics handle the issue on a case-by-case basis. At a minimum, trained assistants should be available whenever a physician or patient requests one.
- Respond promptly to any patient who complains of physician misconduct. Let them know that their complaint is being investigated and that appropriate action will be taken. In most cases, it should **not** be the physician against whom a complaint is made who responds to the patient.
- Recognize that the interests of the clinic may diverge from those of the physician if an allegation of misconduct is made. Contact legal counsel immediately if any question of physician misconduct arises to ensure that the clinic is able to protect all corporate interests and that any reporting requirements are met.
- Discuss with legal counsel how to structure an appropriate investigation and, if necessary, disciplinary response to allegations of sexual misconduct. Consider the advisability of restricting, during the investigation, the practice of any physician against whom a complaint of inappropriate conduct has been made (e.g., requiring exam assistants, limiting appointments to established patients only, limiting the type of examinations performed).
- Notify MMIC immediately if a complaint of inappropriate conduct is made against a physician. Such notice is not for punitive purposes; rather, it will allow the company to work with you and your corporate attorney to resolve the complaint and prevent future problems.

Although the majority of cases have alleged inappropriate conduct by physicians, lawsuits have also been filed against clinics based on the conduct of allied health professionals. The same risk management principles should be applied to these cases.

What About Coverage?

According to Lee King, Vice President of Underwriting, there is no simple answer to the question of whether the policy of insurance with MMIC covers allegations of inappropriate conduct. "Certainly, it was never the intent of the policy to cover sexual acts, and our rate structure does not take this exposure into account."

MMIC's duty to defend or indemnify depends on the specific facts and wording of the allegations in each individual case. At times, coverage has been denied. Generally, however, MMIC has provided a defense to

physicians and clinics under a reservation of rights. By reserving our rights, the company maintains the ability to withdraw from the defense if investigation and evaluation of the case reveal that coverage should not apply.

"If cases of inappropriate conduct continue to be a problem, it is doubtful that this liberal practice of providing a defense can be maintained," says Mr King. "MMIC policyholders and staff need to work together to eliminate the significant exposures these cases create. It is MMIC's expectation that—at a minimum—every clinic will 1) establish a firm policy against inappropriate conduct with patients; 2) follow sound risk management principles in handling patient complaints; and 3) report any complaint of inappropriate conduct immediately to the MMIC Risk Management Department. Our goal is to work with our policyholders to prevent isolated allegations from becoming major problems."

For further information, please contact the MMIC Risk Management Department at 1-800-328-5532.

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- November 15 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Clinical Pathology Conference, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- November 16 **Geriatric Forum** - 7:00 am (MDT), RDT Network Studio, Rapid City Regional Hospital, Speaker: William Hall, MD, Topic: Preventing Falls & Keeping Fit, New Age Medicine; Info: Med Staff Office - 341-8107.
- November 16 **Neuroscience Grand Rounds** - 8:00 am, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- November 16 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- November 16 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- November 16 **Cath Conference** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Alice Glirbas - 333-2766.
- November 17 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- November 17 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- November 21 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- November 22 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speakers: Drs. LuAnn Eidsness, Jerome Freeman and Sue Long, RN, Topic: Pain Management, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- November 22 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
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- November 23 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- November 23 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- November 24 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- November 27 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- November 29 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: Richard Barth, MD, Topic: New Advances in Diabetes Treatment, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
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- December 1 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- December 6 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: Hari Kannan, MD, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- December 7 **Biomedical Ethics** - East Auditorium, Rapid City Regional Hospital, Info: Medical Staff Office - 341-8705.
- December 7 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- December 7 **Cath Conference** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Alice Glirbas - 333-2766.
- December 7 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- December 7 **Clinical Pathology Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: to be announced, Topic: to be announced, Info: Dr's J. Ruggles & R. Thompson, 665-9002.
- December 8 **Pathology Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351, Ext. 313.
- December 8 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- December 11 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- December 12 **Breast Cancer Conference** - 12:00 noon, Meeting Room B, Sioux Valley Hospital, Info: Dr. Thomas Cink - 333-5244.
- December 13 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- December 13 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: Tom Masterson, MD, Topic: Interventional Radiology, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- December 14 **Internal Medicine, Tumor Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: To be announced, Topic: To be announced, Info: Dr. J. Ruggles & Dr. R. Thompson, 665-9002.
- December 14 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- December 14 **Cardiac Cath Conference** - 7:30 a.m., McKennan Hospital Auditorium, Info: Cardiopulmonary Dept, 339-8171.
- December 14 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- December 14 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- December 15 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- December 15 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- December 15 **PALS Renewal** - McKennan Hospital, Sioux Falls; Info: Darcy Sherman-Justice, 339-8096.
- December 15 **ACLS Renewal** - McKennan Hospital, Sioux Falls; Info: Kathy Miles, 339-8096.
- December 19 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- December 20 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Clinical Pathology Conference, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- December 20 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Ronald Halvorson, MD; Topic: Anti-coagulation; Info: David Rossing, MD 331-3490.
- December 20 **Geriatric Forum** - 7:00 am (MDT), RDT Network Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- December 21 **Geriatric Forum** - 7:00 am (MDT), RDT Network Studio, Rapid City Regional Hospital, Social Services Presentation; Info: Med Staff Office - 341-8107.
- December 21 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- December 21 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- December 21 **Neuroscience Grand Rounds** - 8:00 am, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- December 21 **Cath Conference** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Alice Glirbas - 333-2766.

- December 22 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- December 25 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- December 27 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- December 27 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- December 28 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- December 28 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- December 28 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- December 28 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.

MISCELLANEOUS

DECEMBER 1995

- December 1 **Environmental Medicine**, Holiday Inn East, St. Paul, MN. Fee: \$75. 3.75 hrs AMA Category 1 credit. Contact: Registrar, CME, St. Paul-Ramsey Med Ctr, 640 Jackson St, St. Paul, MN 55101. Phone: (612) 221-3223.
- December 1 **Dose-Intensive Chemotherapy Strategies: From the Bench to the Clinic**, Seattle, WA. Fee: \$50. CME credit avail. Contact: Ctr for Cont Educ, U of Neb Med Ctr, 600 S 42nd St, Box 985651, Omaha, NE 68198-5651. Phone: (800) 642-1095.
- December 1-3 **The 28th Annual New York Cardiovascular Symposium**, New York, NY. AMA Category 1 credit avail. Contact: Am College of Cardiology Extramural Programs, 9111 Old Georgetown Rd, Bethesda, MD 20814-1699. Phone: (800) 257-4737.
- December 7-9 **Improving Rural Health Care Through Community Development**, Hyatt Regency Savannah Hotel, Savannah, GA. Fee: \$195. Contact: National Rural Health Assoc, One W Armour Blvd, Suite #301, Kansas City, MO 64111. Phone: (816) 756-3140.
- December 15 **Healthcare Issues - 1995: Diagnosis and Management**, EPNEC, Washington Univ Med Ctr, St. Louis, MO. Fee: \$175. 7.5 hrs AMA Category 1 credit. Contact: CME, Washington Univ Sch of Med, Campus Box 8063, 660 S Euclid Ave, St. Louis, MO 63110. Phone: (800) 325-9862.
- December 15-18 **Ethical Issues in the Care of Terminally Ill and Dying Patients**, Rolling Hills Hotel & Golf Resort, Ft Lauderdale, FL. Contact: Dr Jos V.M. Welie, CEREC Center, PO Box 292932, Ft Lauderdale, FL 33329. Phone: (305) 424-9304.

JANUARY 1996

- January 8-12 **Bone and Soft Tissue Tumors**, Mauna Lani Bay Hotel, Kohala Coast, HI. Fee: \$730. 30.5 hrs AMA Category 1 credit. Contact: Registrar, Mayo Foundation, Sec of CME, 200 First St, SW, Rochester, MN 55905. Phone: (800) 323-2688.
- January 11-12 **Rheumatology Update in Clinical Practice Conference**, Rushmore Plaza Holiday Inn, Rapid City, SD. Contact: Barb Wagley, 357-1340.
- January 19-20 **Clinical Innovations in OB/GYN Ultrasound**, Fairmont Hotel, San Francisco, CA. 15 hrs AMA Category 1 credit. Contact: Ann J. Boehme, CMP, Meetings & Manage Techniques Plus, 62 E Valley Stream Blvd, Valley Stream, NY 11580. Phone: (516) 561-4223.

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THE SOUTH DAKOTA JOURNAL OF MEDICINE thanks these companies for advertising in this Journal.



**Susan Tjarks, President, South Dakota
State Medical Association Alliance**

Just the Facts Ma'am

Recently, I went to Salt Lake City, Utah, to see my mom. While there, she told me a story that had shaken this beautiful city into an anxious and distressed concern for the youth of that area. The story was of three 14 year old girls who were walking along the sidewalk in the early evening hours in their neighborhood toward one of their homes, when a 16 year old boy, who was driving under the influence of alcohol, veered off the road and onto the sidewalk, hitting and killing two of the girls and permanently maiming the third. The boy was a known "party jock" and my question was and is, "What are we doing to stop teens from drinking alcohol?"

The bylaws of the Medical Alliance read, in part, "The AMA Alliance supports the AMA's Healthier Youth 2000 activities to reduce morbidity and mortality in the adolescent population and to help adolescents grow into healthy adults...(and) support(s)...programs that target such concerns as substance abuse, sexuality and pregnancy, victimization, psychological disorders and suicide, violence/trauma, and the development of healthy lifestyles."

I think that we are all aware of the number of challenges that are facing youth today. But, I would contend that if we could find a way to solve the drug and

alcohol problem, we would simultaneously come very close to finding solutions to the other issues plaguing our kids. Let me illustrate my point with "just the facts."

- Fact #1 - The average age in the U.S. of first use of drugs including alcohol is 11! In California, that age is 9. Children as young as 9 years old are alcoholics.
- Fact #2 - Alcohol is the drug of choice for teens, and more than 3 million teens are classified alcoholics.
- Fact #3 - Crime and violence is related to alcohol and other drugs. Over 75% of adolescent deaths are a result of drug violence. Alcohol is involved in 95% of violent crimes and 90% of rapes on college campuses nationwide.
- Fact #4 - In just three years the number of 13 year olds using marijuana has doubled. We have seen a 22% increase in the number of emergency room visits related to hash and marijuana in that time. Also, since 1970 the potency of marijuana has increased by close to three fold. Alcohol is a "gateway drug" to marijuana. Typically, kids will start drinking alcohol before they move on to marijuana.
- Fact #5 - Fetal Alcohol Syndrome, which is a 100% preventable condition and the leading known preventable cause of mental retardation, has increased.
- Fact #6 - One in four children in classrooms come from a family where a family member is chemically dependent. And one of six students will be chemically dependent as an adult.
- Fact #7 - Suicide rates for 15-24 year olds has more than doubled and 70% of young people who have attempted suicide used alcohol and other drugs.
- Fact #8 - Over 70% of all teenage pregnancies involved alcohol or other drugs at the time of conception. One in four teens has tried illegal drugs before high school.
- Fact #9 - The number one killer of teens in America today is alcohol related car crashes, but alcohol use is also associated with homicides, suicides and drownings, the three other leading causes of death among youth. More than 4 million adolescents drink in any given month.

Fact #10 - The United States consumes 60% of the illicit drugs in the world, and U.S. teens rank number one in the world for drug abuse.

Fact #11 - We spend 237 billion dollars a year on health care problems resulting from alcohol and other drug use.

I believe that these *facts* speak for themselves. Somehow we have to change the public's opinion that "kids are going to drink regardless of what we do". I don't think that is true. But if that is our prophecy, then indeed, it will be self-fulfilling. George Gallup, Jr said, "America does not have a crime problem...America does not have a teenage pregnancy problem. America does not have a problem of broken homes and marriages. America has an alcohol and drug problem." Let us as physician families do everything in our power to ensure that alcohol and drugs do not shatter the dreams of our children. Let's do it for them. Let's do it for our future.

Susan Jarks

The Physicians HELP Committee & Rehabilitation Program

Designed to help physicians addicted to alcohol and/or other drugs as well as those with emotional and psychiatric disorders.

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1995 - 1996

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Commerce: **Emery, *Shoener, Everist, Schoenbeck, Larson, Olson, Valandra.

Education: **Porch, *Paisley, Aker, Staggers, Hutmacher, Larson, Olson.

Government Operations & Audit: **Johnson, *Schoenbeck, Morford-Burg.

Health & Human Services: **Negstad, *Dunn (James), Emery, Halverson, Kloucek, Lawler, Valandra.

Judiciary: **Everist, *Whiting, LeFleur, Schoenbeck, Herseth, Nelson, Rasmussen.

Legislative Procedure: **Halverson, *Rounds, Bender, Porch, Herseth, Nelson, Rogan.

Local Government: **Emery, *LaFleur, Aker, Schoenbeck, Kloucek, Larson, Lawler.

Retirement Laws: **Kleven, *Rounds, Thompson, Lange, Lawler,

State Affairs: **Halverson, *Rounds, Dunn (James), Porch, Whiting, Herseth, Nelson, Olson, Rogan.

Taxation: **Paisley, *Everist, Negstad, Shoener, Staggers, Flowers, Hutmacher, Lange, Rasmussen.

Transportation: **Shoener, *Paisley, Staggers, Whiting, Flowers, Lang, Rogan.

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Commerce: **Sears, *Roe, Bierschbach, DeMersseman, Duniphan, Hassard, Kringen, Letellier, Pederson, Barker, Haley, Nemas, Olson.

Education: **Schreiber, *Brooks, Brosz, Brown (Richard), DeMersseman, Hunt, Madden, Van Gerpen, Wick, Davis, Lockner, Lucas, Reedy.

Government Operations & Audit: **Munson (Donald), *Strand, Chicoine.

Health & Human Services: **Munson (David), *Brown (Arnold), Belatti, Eidsness, Fiegen, Hassard, Madden, Matthews, Monroe, Billion, Fischer Clemens, Gleason, Hagen.

Judiciary: **Hagg, *Hunt, Belatti, Bogue, Brosz, Fitzgerald, Krautschun, Matthews, Ries, Gleason, Koetzle, Moore, Volesky.

Legislative Procedure: **Krautschun, *Gabriel, Cutler, Hagg, Putnam, Green, Schaunaman.

Local Government: **Wagner, *Bierschbach, Drake, Duniphan, Fiegen, Monroe, Strand, Weber, Anderson, Fischer, Clemens, Hagen, Koetzle, Waltman.

Retirement Laws: **Jorgensen, *Sears, Matthews, Anderson, Davis.

State Affairs: **Gabriel, *Pederson, Cutler, Jorgensen, Munson (David), Roe, Schreiber, Sears, Wagner, Billion, Haley, Lucas, Schaunaman.

Taxation: **Cutler, *Jorgensen, Bogue, Brown (Richard), Hagg, Koskan, Letellier, Munson (Donald), Napoli, Barker, Moore, Nemec, Waltman.

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(PLEASE SAVE THIS DIRECTORY FOR FUTURE USE)

Treatment of *Aeromonas Hydrophila* Infection in a Deep Tissue Wound

Bradley J. Archer, MSI and Richard P. Holm, MD

ABSTRACT

We report the case of a young woman who sustained a knee laceration in an automobile accident and was subsequently exposed to water. Although properly cleansed and closed, her wound became infected and she was initially treated with a single-dose parenteral cephalosporin. The infection progressed and cultures indicated a polymicrobial infection which included *Aeromonas hydrophila*. Significant tissue damage ensued and a lengthy hospitalization was required. *Aeromonas*, although rarely a cause of infection in otherwise healthy individuals, should be suspected in wounds exposed to fresh water.

INTRODUCTION

Aeromonas hydrophila is a gram-negative, facultatively anaerobic bacillus that is commonly found in fresh water sources all over the United States.^{1,2} This bacteria has been isolated from raw surface, ground and drinking water indicating that standard chemical treatment and chlorination is unable to eradicate this organism.³ *A. hydrophila* can be a cause of diarrhea in children and adults and is included in routine laboratory screening for causative organisms. This organism has also been associated with sepsis in immunocompromised patients. It is interesting to note that medical leeches have been reported to transmit *A. hydrophila*. Although the incidence of soft tissue infection with *Aeromonas* is low (0.7 in one million in the state of California⁴) the extensive tissue damage that can occur is so traumatic that the following case is worthy of report.

The aeromonads produce extracellular toxins including hemolysins and cytotoxins. These are responsible for severe tissue damage which can include liquefaction of muscle.⁵ Also worth noting is that the treatment of this infection is often inadequate due, in part, to the similarity in clinical presentation to streptococcal cellulitis.⁶

In this paper, we describe the care of a patient with a polymicrobial cellulitis which included *A. hydrophila*. We believe this experience provides direction to propose a therapeutic guideline for similar cases.

CASE REPORT

An 18 year-old student came in to the emergency room of a rural hospital following an automobile accident. She had a mild concussion, soft tissue injury to her neck, right shoulder and left elbow, and a laceration to the skin, probably entering the bursa over her right knee. An X-ray was taken of her leg. The laceration was cleansed with betadine and hydrogen peroxide and then closed. She was admitted that night to an observation bed for neurologic monitoring and to provide pain relief. The patient was released the following morning feeling better. However, she returned 36 hours later complaining of fever, pain and swelling in her leg. She was given ceftriaxone 1g IV and a prescription for cephalexin 500mg four times daily. Despite this, the pain and swelling worsened and the patient presented to our emergency room.

On examination, her right leg was swollen, hot, red and extremely tender. The wound was draining and she had a fever of 100.2° F. After preparation with betadine and lidocaine, the wound was opened by sharp dissection and the approximately 100cc of clear drainage was cultured and gram stained. Blood cultures and a CBC were drawn and the patient was admitted to the hospital. The initial gram stain showed a moderate amount of WBCs, scant bacteria, and no sign of *Clostridium* species. Other significant laboratory results on admission showed an elevated WBC count of 29,500 with a left shift. IV antibiotic therapy was initiated with ampicillin/sulbactam 3g every 8 hours and gentamicin

70mg bolus followed by infusion of 110mg every 8 hours. The microbiology report received on the following day revealed *Staphylococcus aureus*, *Escherichia coli*, and *Aeromonas hydrophila* growing from the wound culture. An X-ray of the right leg on admission was unremarkable as was a CT scan and venogram which were accomplished in the ensuing three days.

The patient responded to the antibiotic regimen over the first four days. Her temperature decreased and the white blood count declined from 29,500 to 21,300 with bands dropping from 31% to 1%. However, on the 5th hospital day she developed a fever again and a left shift reoccurred in the WBC differential. Elevation of the foot of the bed reduced the swelling in the lower leg but edema of the thigh, pelvic area and lower abdomen increased. This prompted a trial of intravenous furosemide which was not helpful. The patient had considerable pain throughout the hospitalization which was only partially controlled with ketorolac IM and meperidine IV.

Interaction with the patient's family revealed that immediately following the auto accident, the patient had fallen into a drainage ditch when climbing out of her car. This ditch was filled with stagnant water coming from a pond in the middle of a cattle pasture. This information made the presence of aeromonas in the wound more explainable. Because her condition persisted and even worsened after appropriate antibiotic therapy over five days, we decided to transfer the patient to a tertiary hospital where she could be placed under the care of an infectious disease specialist. Her antibiotic therapy was changed to vancomycin, clindamycin and ceftazidime. Gentamicin was continued and the ampicillin/sulbactam was discontinued. An MRI was then accomplished which suggested abscess formation. A fasciotomy was performed, but no puss was found. Prolonged IV antibiotic treatment, physical therapy and skin grafting were provided. Finally, the patient recovered sufficiently to return home 30 days after her automobile accident. The total cost of the illness was approximately \$57,000.

DISCUSSION

We believe the severity and protracted nature of the infection in this case can be largely attributed to the presence of *A. hydrophila* in the wound. The literature reports several similar cases of soft-tissue infection following wound contamination by raw surface, ground and even drinking water. Although the incidence of such an infection is extremely low, this case merits attention because *A. hydrophila* can cause extensive tissue destruction and require a lengthy recovery time. Streptococcal necrotizing fasciitis was suspected when antibiotic selection was initiated but ruled out when the cultures failed to grow any *Streptococcus* strains.⁷

Wet clothes, or any history or clues of water contamination to open wounds should now alert the

clinician to the risk of *A. hydrophila*. In retrospect, it is easy to suggest not closing the wound primarily. However, large leg wounds such as this patient had can be so debilitating that the patient (and the clinician) desire and expect closure. Therefore, we strongly advise that in such wounds at risk, very aggressive cleansing and lavage would be helpful prior to closure. It is our understanding that proper cleansing of the wound in this case did occur. The possible involvement of the suprapatellar bursa in this case may have made it especially problematic.

What else could be done to prevent such a severe infection to occur in water contaminated wounds? What remains is the hope that the early initiation of antibiotic therapy would be effective. *A. hydrophila* is not sensitive to penicillins or first and second generation cephalosporins. It is most susceptible to the aminoglycosides with the exception of streptomycin, trimethoprim/sulfamethoxazole, the fluoroquinolones, and the third generation cephalosporins.⁸ We suggest that in the emergency room, ground water contaminated wounds at risk for such infection might be treated prophylactically with oral trimethoprim/sulfamethoxazole and/or with a single IV dose of one of the aforementioned antibiotics. It is important to note that the benefits of such prophylaxis remains unproven in controlled studies⁸ but has been suggested in published case reports.^{2,10}

SUMMARY

The purpose of this communication is to introduce the clinician to the possibility of *A. hydrophila* infection in wounds exposed to fresh water. We recommend that water-exposed wounds of a less severe nature, particularly puncture-type wounds where irrigation is difficult, be allowed to remain open if possible. Even with proper wound cleansing and irrigation, a polymicrobial infection occurred in this case. Due to the possibility of microbial resistance,¹¹ we caution that the use of the above mentioned antibiotic prophylaxis be reserved for water-contaminated wounds with a high risk of developing infection such as those where retained foreign material is possible.

ACKNOWLEDGEMENTS

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Housecall

*He listens with a well-trained ear
to the coughs and sputters.
This, the third housecall in five days.
Hmmmmmmmm, he murmurs ominously.
I thought we had this taken care of last time,
but what we have here is the trickiest to fix--
Intermittent Problems.
He shakes his head sadly,
gives his beard a slight tug.
I usually run into one of these cases every year.
Sometimes it'll last for months.
Oh, great! I groan involuntarily
and reach for the blood pressure pill
I forgot to take in the morning
with my cup of decaf.
Gently he removes the furnace cover,
palpates darkened inner recesses with skilled fingers,
taps and adjusts with pliers and wrench.
Prometheus in plaid and denim
intent on working mythological magic,
bringing fire however he can
by skill, cajolery, or theft.
Like a hoary-headed vestal virgin I wait
to warm my hands at the flickering hearth of hope.*

Teresa S. Gridley
Sioux Falls, SD

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South Dakota Foundation for Medical Care

SDFMC Implements Champus Review Contract

After lengthy negotiations, the South Dakota Foundation for Medical Care (SDFMC) has successfully expanded its review services in South Dakota by contracting to perform physician reviews on inpatient CHAMPUS claims. CHAMPUS stands for the Civilian Health and Medical Program of Uniformed Services and is the health care insurance program for military dependents.

This is not necessarily a new responsibility, since in 1991 SDFMC had the peer review organization contract directly with the Department of Defense to review CHAMPUS admissions in South Dakota. In order to simplify program administration, the Department of Defense later decided to subcontract the CHAMPUS review contract to a single PRO, and make that PRO responsible for coordinating review in all the states. SDFMC currently has review authority for Medicare, Medicaid and CHAMPUS.

The primary contractor for physician peer review services for CHAMPUS is PRO-West, the peer review organization for the state of Washington. SDFMC is subcontracting with PRO-West to provide physician reviews for those cases referred by PRO-West because of their screening process. The review area is actually the thirteen state midwest region, which means that SDFMC is responsible for providing physician review resources for more than just South Dakota. PRO-West refers the charts to SDFMC for review and specifies the desired specialty of the reviewing physician. So far SDFMC has been able to meet this request from our panel of physician reviewers.

When CHAMPUS decided to require physician review of South Dakota inpatient claims, the physicians of South Dakota decided that this review should be performed by our local physicians. Initially we planned on only reviewing South Dakota claims, but as a result of negotiations with PRO-West, we have expanded our review resources to areas outside South Dakota. The review is primarily retrospective physician chart review, but there will also be limited referrals from the CHAMPUS preauthorization program.

SDFMC has only been reviewing CHAMPUS for a couple of months and is still fine-tuning the process. Thus far the cooperation of our physician reviewers has been outstanding. PRO-West has stated that they have been very pleased with the prompt and thorough review determinations rendered by South Dakota physicians. I personally want to thank all the physicians involved for their invaluable time and expertise in reviewing these CHAMPUS claims. I know I can count on the continued support of our physicians as the Foundation continues to pursue other opportunities in the peer review area.

Wishing you a Merry Christmas,

Gerald E. Tracy, MD
Medical Director

On Ritual*

The history of humankind revolves, to a large extent, around ritual. Humans cherish ceremonial customs which can embody such ideals as commitment, hope and solidarity.

Perhaps one of the greatest champions of ritual in modern times was Joseph Campbell. He was a renowned teacher for many years at Sarah Lawrence College. His love for mythology and societal custom was legendary. Near the end of his life, Campbell became known to many new people through the interviews he did with Bill Moyers. These appeared on PBS and were also compiled into a book entitled, *The Power of Myth*. Campbell talked about ritual and myth in the following terms:

"A myth is... a metaphor for what lies behind the visible world." Later he comments "mythology has a great deal to do with the stages of life, the initiation ceremonies as you move from childhood to adult responsibilities..." He notes that the rituals in our society are actually mythological rites. He explains that such rituals have to do with "recognition of the new role that you're in, the process of throwing off the old one and coming out in the new, and entering into a responsible profession." (XVII, pp 11-12.)¹

Last fall my wife and I were imbued with ritual when we attended the ceremonial blessing of a wood kiln at St. John's University in Minnesota. The program consisted of a unique and stylized blend of Christianity and Japanese custom. Gregorian chant and the sprinkling of holy water were combined with the cultural custom of sprinkling salt at all the openings of the kiln to help ensure its good fortune. The solemnity and importance of the occasion was emphasized by the large number of people in attendance and by the presence of public broadcasting personnel. In the several speeches that were given, much emphasis was placed on the use of indigenous materials, coupled with the artists' creativity, to fashion the unique and beautiful.

While I felt privileged to have been invited to this ceremony, I did feel emotionally distanced from the solemnity of the ritual per se. However, I was struck by the diversity of people in attendance and by how seriously many seemed to take the ceremonies. In addition, my interest was particularly focused because of

my recent reading of Joseph Campbell. As I watched the proceedings at St. Johns, I kept thinking of how Campbell saw important connections between the present and past generations in such ceremony. Indeed Campbell's enduring belief in the importance of ritual and myth can easily prove to be a contagious sentiment.

Certainly, in medicine, ritual abounds. Our interactions with patients are generally very stylized. We approach patients as the somewhat aloof healer, possessing special knowledge and curative powers. Our history taking is frequently stylized and patterned on such long-standing adages as dividing the data into present illness, past history, and review of systems. Our daily hospital rounds are often carefully structured and highly ceremonial. The physician may purposely assume a carefully crafted demeanor of wisdom and caring and professional detachment as the patient and family at the bedside are approached. The language we use, riddled with medical jargon and aphorisms, is still another example of ritualistic behavior that has been promulgated for generations.

Joseph Campbell was much more interested in the messages of ritual and myth and what they reveal about humanity, than he was in the inherent "goodness" or "badness" of stereotypical ritualistic behavior. Often, such behavior develops in a society because it is useful. It may serve to amplify various societal roles and responsibilities. In the case of the physician, such behavior can signify the presence of "the healer" as someone clearly in control of the situation. As such, the ritualistic behavior of contemporary physicians can constitute a fascinating historical and sociological subject.

It is important, however, not to let our implicit confidence in the utility of ritual hamper our ability to carefully explore the patient's life as part of the illness at hand and to have the ability to touch and communicate with the patient in a personal, compassionate fashion. Often the patient's problem cannot be simply deduced (at least in its entirety) from superficial discourse with the patient. Rather, in order to truly understand the patient and the extent and significance of a given illness, the physician must work hard to reach the patient on a very human level. In such cases, standing behind the formal and remote dictums of ritual can obstruct the physician's basic task of trying to learn about the patient's specific health problems and how they play out in the complicated context of an individual life. It would seem that when this latter type of interaction is sought, the physician must consciously guard

*This essay was recently published in the volume *Come and See: Reflections on Values and Caring in Medicine*. This collection of essays and poetry was published by Jerome W. Freeman in 1995.

against the reassuring dictums of ritual, which may actually serve to distance the physician from the patient. The physician must study each patient with sufficient focus to know when the reassuring protection of professional ritual must be abandoned in favor of the complicated challenge of perceiving and relating to patients within the unique complexities of their lives. Oftentimes, healing may depend upon such effort.

Jerome W. Freeman, MD
Editor

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A Brief Report

Tobacco Use in Children - A South Dakota Physician's Perspective

Allen E. Nord, MD

There are a lot of public health issues which we, as physicians, deal with everyday, but no issue is more important than childhood addiction to tobacco. Although this has been a problem for years, research shows it is clearly growing. With President Clinton's recent announcements and restrictions of access and advertising of tobacco products, the issue has now been thrust into the headlines.

The tobacco industry wants us to believe that smoking is a choice made by knowledgeable adults. The fact is that tobacco use is a gripping addiction and the majority of lifetime users start their addiction in their early teenage years. This childhood decision to experiment with tobacco often leads to a lifelong, agonizing addiction and possibly death. As the national debate about this subject starts to unfold, we, as physicians and community leaders, need to decide what we should do to protect our children from this addictive product, and from an industry who clearly seems to prey upon our youth. The following facts about nicotine addiction are drawn from a recent summary from the Institute of Medicine:

1. The sheer size of the public health issue of tobacco use is staggering. The average citizen has little knowledge of the scope of the problem. Tobacco represents the leading cause of preventable death in this country. Tobacco kills more Americans than AIDS, alcohol, auto accidents, murder, suicides, illegal drugs and fires combined. The current estimate is that 1,200 Americans die from tobacco products use each day. This is over 400,000 a year! And each death represents an average of 15 years lost. For the American population this represents 6 million years of premature loss of life — each year!
2. As a family physician, I diagnose and treat tobacco related illness in adults on a daily basis. Sadly, I also frequently see the addiction starting in children often as young as 10-12 years old. These young people are the primary new customers for the tobacco industry. Each day 3000 children become regular smokers in this country.
3. Tobacco is second only to the auto industry in advertising and promotion. To find its new young customers, the industry spends 11 million dollars a day. Children are attracted to the photo images of beautiful, healthy, happy young adults smoking and enjoying life. They are also attracted to the cartoon characters like Joe Camel. A recent study showed that nearly 1/3 of children 6 years old or younger match Joe Camel with cigarettes and that by that age they were as familiar with him as with Mickey

Mouse or Ronald McDonald. In 3 years, the market share of under 18 year old smokers for Camels went from 1% to 13% of the market. Since the Joe Camel campaign started, smoking among U.S. teens has risen 10%.

4. The size of illegal tobacco consumption by children is enormous. Eighty-nine percent of all lifetime smokers start before they reach age 18, and 62% start before age 16. Children illegally consume 17 billion cigarettes each year. Over 20% of high school seniors smoke regularly.

As adults we **should** have the knowledge and experience to hopefully make appropriate decisions about our lives. Children, however, lack this depth of knowledge and often fail to grasp the idea of mortality. They severely underestimate the danger of their tobacco experimentation. They are enticed by their peers to experiment. They are seduced by the advertising. What they do not anticipate is the death grip of nicotine addiction. By age 18, nearly 3/4 of underage smokers have already tried to quit and have failed—they are trapped!

For years South Dakota has had laws that restrict the sale of tobacco to minors and also restrict the placement of vending machines. Over and over, studies show that these laws go largely unenforced. They are described as petty offenses or minor crimes. This is just the way the public perceives the problem! Yet we are dealing with one of the most addictive substances known and the leading cause of preventable death.

THE SAD FACTS IN SOUTH DAKOTA

In order to understand the problem in South Dakota, an extensive survey was recently completed in October 1995 by the IMPACT Coalition, (Initiates to Mobilize for the Prevention and Control of Tobacco use). This is a coalition of health care and youth organizations who have a shared mission to decrease youth use of tobacco products. Five hundred (500) young South Dakotans age 10 to 17 were interviewed across the state.

In grade school 12.5% of children responding had tried tobacco. This level jumped to 43.1% by middle school age and by high school it was nearly 60%. Of the 10 to 14 years olds, 15.1% currently use tobacco products. Current use rose to 27.7% in the 15 to 17 age range. The number of females and males who used tobacco was almost equal. Over half of the current users say they have used tobacco for two years or more. Nearly two-thirds of the current tobacco users believe they will still be using tobacco in 5 years. Over half of

the children who currently use tobacco buy their own either from a vending machine or a cashier at a store. The 10 to 14 age range was 1 1/2 times more likely to buy their tobacco from a vending machine, while 15 to 17 year olds were twice as likely to buy their tobacco through a cashier at a store.

THE NATIONAL STANCE

The American Medical Association recently (July 19, 1995) devoted an entire issue to the evaluation of how the tobacco industry has manipulated and hidden data from the public in order to protect its lucrative sale of tobacco. The closing editorial of that issue outlines an aggressive 14 point program to decrease tobacco use. It goes on to state, "The AMA maintains an unequivocal stance against tobacco. The AMA reminds physicians, the public, and politicians that the damning evidence against tobacco makes opposition to its use a pressing, nonpartisan public health issue...On behalf of the physicians of this country and the people they serve, the AMA pledges its best efforts to the eradication of tobacco related disease. We solicit the support of the public and the government in the endeavor. It is a worthy cause."

WHAT CAN BE DONE?

We have to start somewhere and I am convinced it is with our children. There are multiple ways we can improve the situation in South Dakota. Certainly, aggressive educational efforts aimed at the 10 to 14 year old age group will, at least, provide children with the knowledge they need to resist starting tobacco. An innovative approach in Chicago suburbs has had a dramatic effect on teenage tobacco use. They simply treat tobacco like alcohol. They require licensure of all tobacco retailers and photo ID to purchase the product; and then aggressively monitor compliance with sting operations. They have seen illegal sales to children drop from almost 90% down to 0%. What is even more encouraging, they have been able to sustain these results now for five years. There are certainly multiple other legislative options which could be considered.

In an eloquent essay in a recent *New England Journal of Medicine* (NEJM) issue, Dr David Kessler from the FDA describes tobacco use as a "Pediatric Epidemic" and suggests the solution to this epidemic lies in the next generation. If we can keep our children from starting tobacco use, we could have an enormous impact on the health of our communities and radically reduce the incidence of smoking-related death and disease.

We must no longer look upon childhood tobacco use as a minor issue. We must realize that it is the start of a lifelong addiction which could lead to a premature death. We must encourage our law enforcement officials as they enforce our present laws and we must insist that our shop owners and retailers aggressively restrict the sale of tobacco to minors.

In the coming months, the South Dakota IMPACT Coalition is planning a concentrated, state-wide effort to educate the public and our legislators about these issues. Our goal is to allow our children to grow up in communities that foster a healthy lifestyle and protects them from the addiction of tobacco.

AUTHOR

Allen E. Nord, MD, family practice physician in Rapid City, SD.

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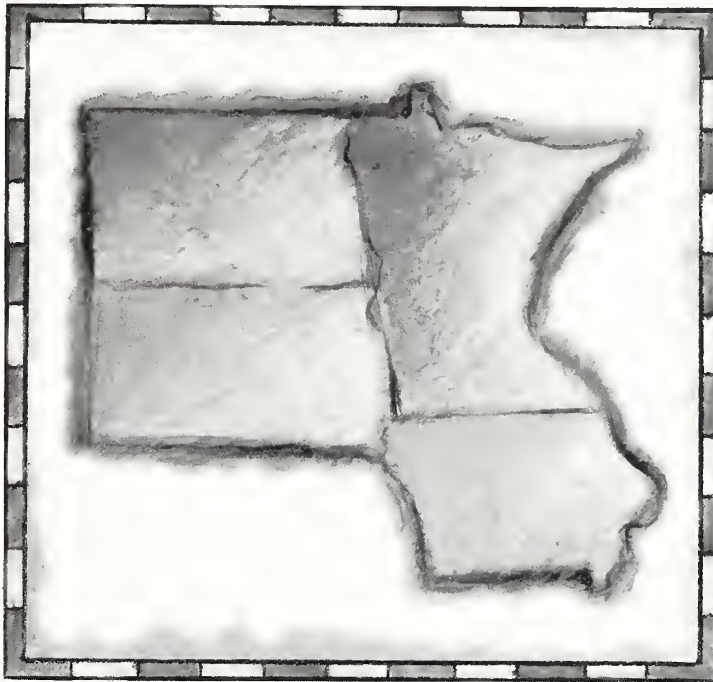
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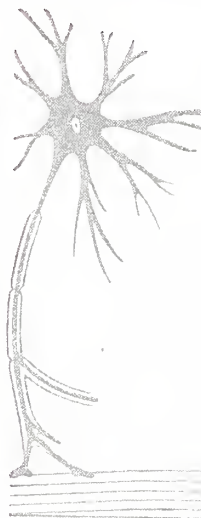
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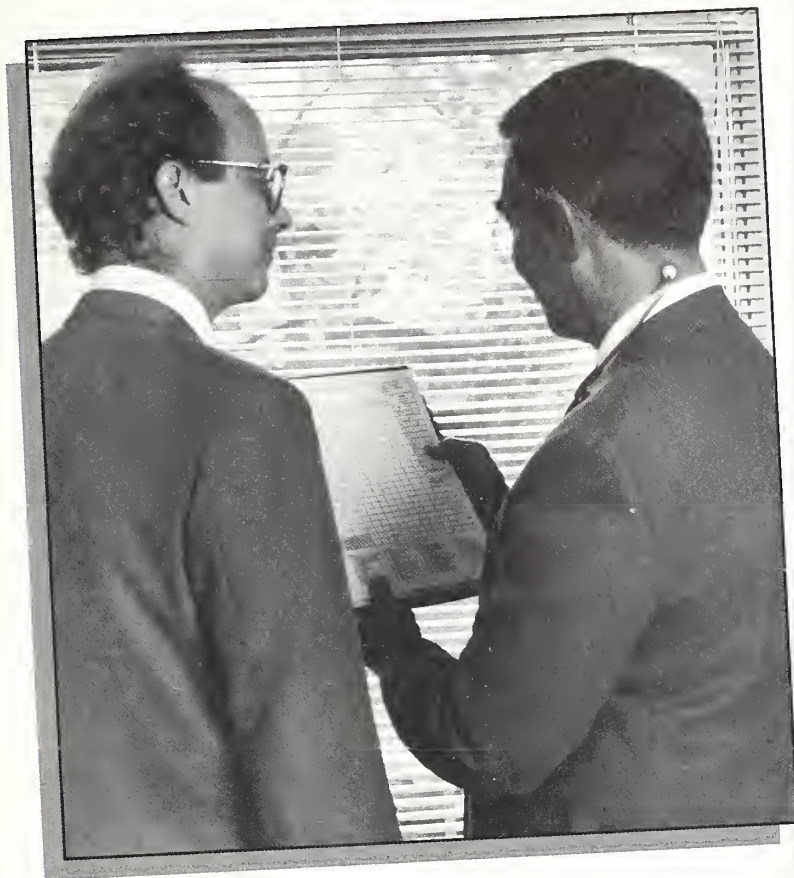
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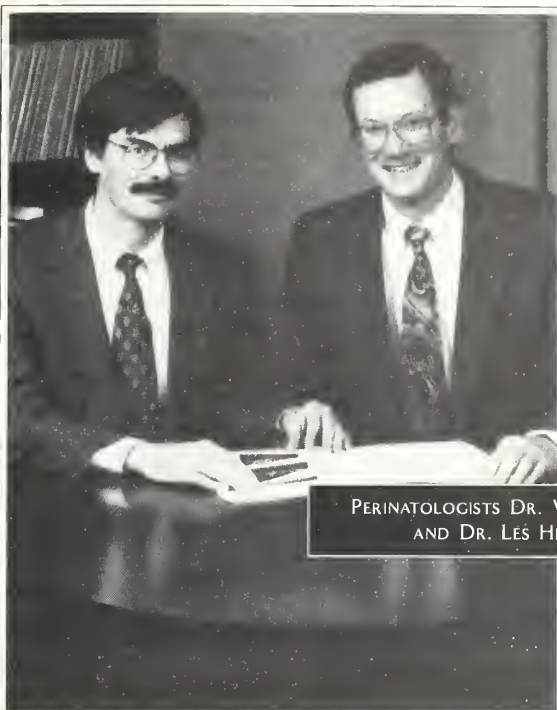
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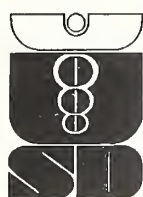
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Drug Misuse as a Disease

Brian Kaatz, Pharm.D, Sioux Falls, SD

The October 9, 1995 issue of Archives of Internal Medicine contained an important article which addressed drug related morbidity and mortality.¹ The article attempted to create a conceptual model which could estimate the costs to society of the misuse of prescription drugs. The authors are "pharmacoeconomists", individuals who study the financial impact of drug use in a broad, societal way. Their findings and conclusions are troubling.

The term "drug misadventuring" has been used to describe inappropriate or poor outcomes of prescription drug use. The extent and cost of drug related morbidity and mortality is of great importance to physicians and pharmacists, to administrators, patients, and society as a whole, and as this study shows, the magnitude of the problem might be considered a problem of public policy.

The best estimates of annual total United States expenditures for prescription drugs is \$75 B. In analyzing what additional costs might be incurred as a result of noncompliance, adverse drug reactions, and other misadventures, previous reports have limited themselves to direct hospitalization costs. These estimates of direct costs have been in the billions of dollars, with estimates of indirect costs adding substantially to the total. The Archives study goes beyond the hospitalization costs and utilizes a model that considers the additional expenses of outpatient physician visits and follow-up for new medical problems, return visits to the pharmacy for another drug, and loss of productivity due to problems that did not necessitate hospitalization.

The study modeled outcomes owing to drug therapy in the ambulatory population of the U.S. Estimated costs associated with the management of drug-related morbidity and mortality was \$76.6 B. Thus for every dollar spent purchasing prescription drugs, another is spent paying for adverse outcomes! The largest component of the total cost was drug-related hospitalizations, comprising about 62% of the total cost. Admissions to long-term care facilities represented the second largest component of the total cost of illness at \$14 B.

If these projections are reasonably accurate, it becomes clear that this issue ranks close to other "disease" entities in terms of societal cost. For example, diabetes care has been estimated to cost \$45 B annually. Treatment of cardiovascular diseases has been estimated to cost \$117 B annually. The problem of drug misadventuring should be more than a minor concern for public health policy makers.

Not all costs of drug related problems are avoidable. Indeed, even the most compliant patients, the most diligent drug monitors, and most careful prescribers will be faced with unforeseen problems. How could the number of adverse events and associated costs be potentially averted? Again, there could be debate about this conceptual model and the probabilities associated with them, but even a 10% to 20% difference (improvement) in these costs would represent significant cost savings and greatly contribute to improved health policy.

The responsibility for safe drug use can not be held by a single profession. Physicians, nurses and pharmacists all have roles to play. Reinvigorated multidisciplinary efforts should be encouraged and emphasized. Health policy that dictates drugs should be obtained only from a least-expense standpoint should be challenged, if that translates into patients not being encouraged to remain compliant or not being monitored by a second competent set of eyes and ears. General awareness of the problem and its associated costs should be emphasized to the medical profession and the general public. A continuing emphasis to patients of the importance of adhering to drug regimens is important throughout the process of obtaining prescription drugs. More time spent with patients who receive drugs should result in better compliance and a better understanding of potential problems and what to do about them. Patients should demand to be served by practitioners who care about their drug outcomes.

Costs of drug related morbidity in the United States are considerable. Policies and professional services should be made optimal to reduce and prevent drug related problems.

REFERENCE

1. Johnson JA, Bootman JL: Drug related morbidity and mortality, a cost-of-illness model. *Arch of Int Med* 1995;155:1949-1956.



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CME Conferences

CME Conferences being held on a regular basis at various health care facilities throughout the state of South Dakota.
(1 hour AMA Category credit available unless otherwise specified)

CME CONFERENCES

DECEMBER 1995

- December 15 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- December 15 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- December 15 **PALS Renewal** - McKennan Hospital, Sioux Falls; Info: Darcy Sherman-Justice, 339-8096.
- December 15 **ACLS Renewal** - McKennan Hospital, Sioux Falls; Info: Kathy Miles, 339-8096.
- December 19 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- December 20 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Clinical Pathology Conference, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- December 20 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: Ronald Halvorson, MD; Topic: Anti-coagulation; Info: David Rossing, MD 331-3490.
- December 20 **Geriatric Forum** - 7:00 am (MDT), RDT Network Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- December 21 **Geriatric Forum** - 7:00 am (MDT), RDT Network Studio, Rapid City Regional Hospital, Social Services Presentation; Info: Med Staff Office - 341-8107.
- December 21 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- December 21 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- December 21 **Neuroscience Grand Rounds** - 8:00 am, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- December 21 **Cath Conference** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Alice Glirbas - 333-2766.
- December 22 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- December 25 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- December 27 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- December 27 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- December 28 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- December 28 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- December 28 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- December 28 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.

JANUARY 1996

- January 3 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- January 4 **Cath Conference** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Alice Glirbas - 333-2766.
- January 4 **West River Internal Medicine Grand Rounds** - 2:00 pm, Hot Springs VA Hospital, Speaker: to be announced, Topic: to be announced, Info: Dr. Donald Humphreys - 357-1340 (Kris Karbo).
- January 4 **Biomedical Ethics** - East Auditorium, Rapid City Regional Hospital, Info: Medical Staff Office - 341-8705.
- January 4 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.

- January 4 **Clinical Pathology Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: to be announced, Topic: to be announced, Info: Dr's J. Ruggles & R. Thompson, 665-9002.
- January 4 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- January 5 **Morbidity/Mortality Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351, Ext. 313.
- January 5 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- January 5 **West River Internal Medicine Grand Rounds** - 12:00 noon, Fort Meade VA Hospital, Speaker: to be announced, Topic: to be announced, Info: Dr. Donald Humphreys - 357-1340 (Kris Karbo).
- January 5 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- January 9 **Breast Cancer Conference** - 12:00 noon, Meeting Room B, Sioux Valley Hospital, Info: Dr. Thomas Cink - 333-5244.
- January 10 **CPR Certification/Recertification** - 7-10:00 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351, Ext. 313.
- January 10 **Dermatopathology Conference** - 7:30 am, SVH Pathology Conference Room 1513 Info: Joan - 333-1730.
- January 10 **Internal Medicine Grand Rounds** - 7:30 am, McKennan Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- January 10 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.
- January 11 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- January 11 **Internal Medicine, Tumor Conference** - 8:00 am, Sacred Heart Hospital, Doctor's Dining Room, Yankton; Speaker: To be announced, Topic: To be announced, Info: Dr. J. Ruggles & Dr. R. Thompson, 665-9002.
- January 11 **Cardiac Cath Conference** - 7:30 a.m., McKennan Hospital Auditorium, Info: Cardiopulmonary Dept, 339-8171.
- January 11 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- January 11 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- January 12 **Pathology Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351, Ext. 313.
- January 12 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- January 15 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- January 16 **Endorama (Endocrinology Conference)** - 7:30 am, Sioux Valley Hospital, Info: Dr. J. Michael McMillin - 334-8387.
- January 17 **CPC Wednesday Noon Conference** - 12:00 noon, 4th Floor Conference Rooms, Speaker: to be announced; Topic: to be announced; Info: David Rossing, MD 331-3490.
- January 17 **Geriatric Forum** - 7:00 am (MDT), RDT Network Studio, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- January 17 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- January 18 **Cath Conference** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Alice Glirbas - 333-2766.
- January 18 **Neuroscience Grand Rounds** - 8:00 am, Meeting Room A, Sioux Valley Hospital, Info: Amy Barnett - 333-3206.
- January 18 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- January 18 **Tumor Conference, Dakota Midwest Cancer Institute** - 12:00 noon McKennan Campus, Info: Norma Wise, 339-8568.
- January 19 **Psychiatry Grand Rounds** - 12-1:30 pm, VA Regional Bldg - Training Room, Sioux Falls, Info: Dougals J. Soule, PhD - 339-6785.
- January 19 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- January 24 **Geriatrics Grand Rounds** - 12:00 noon, Sioux Valley Hospital Meeting Room A, Info: Gwen Jensen, RN, 333-1000.

- January 24 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).
- January 25 **Cancer Conference** - 11:00 a.m., St Luke's Midland Regional Medical Center, Aberdeen, Info: Dr. Roy Burt, 662-5194.
- January 25 **Cancer Conference** - 12:00 noon, West Auditorium, Rapid City Regional Hospital, Info: Cancer Registry - 341-8705.
- January 25 **Pediatric Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Info: Dr. Larry Wellman - 333-7178 (Joan).
- January 25 **Trauma Grand Rounds** - 12:00 noon, Meeting Room A, Sioux Valley Hospital, Info: Monica Huber - 333-7388.
- January 26 **Physicians Continuing Education** - 7:30 am, West Auditorium, Rapid City Regional Hospital, Info: Med Staff Office - 341-8107.
- January 26 **Morbidity/Mortality Conference** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- January 26 **Tumor Conference** - 12:30 pm, Brookings Hospital, Conference Rooms A & B, Brookview Manor, Info: Phyllis Sander, RN, 692-6351, Ext. 313.
- January 29 **Tumor Board** - 8:00 am, Fort Meade VA, Info: Candy Benne, 347-7153.
- January 31 **Internal Medicine Grand Rounds** - 7:30 am, Sioux Valley Hospital Auditorium, Speaker: to be announced, Topic: to be announced, Info: Dr. Brian T. Hurley - 357-1366 (Barbara).

MISCELLANEOUS

JANUARY 1996

- January 11-12 **Rheumatology Update in Clinical Practice Conference**, Rushmore Plaza Holiday Inn, Rapid City, SD, Contact: Barb Wagley, (605) 357-1340.
- January 15-19 **27th Annual Cardiovascular Conference**, Snowmass, CO. AMA Category 1 credit avail. Contact: American College of Cardiology, 9111 Old Georgetown Rd, Bethesda, MD 20814-1699. Phone: (800) 257-4739.
- January 17-21 **21st Annual meeting of the Alliance for CME**, Hilton at Walt Disney World Village, Orlando, FL. Fee: TBA. AMA Category 1 credit avail. Contact: Daniel E. Reichard, George Washington Univ Med Ctr, Off CME, 2300 K St, NW, Washington, DC 20037. Phone: (202) 994-4285.
- Jan 29 - Feb 2 **Echo Hawaii 1996**, Maui, HI. CME credit avail. Contact: Daniel E. Reichard, George Washington Univ Med Ctr, Off CME, 2300 K St, NW, Washington, DC 20037. Phone: (202) 994-4285.
- Jan 6 - Feb 15 **Natural Family Planning Practitioner**, Assumption College, Worcester, MA. CME Category 1 credit avail. Contact: Sally C. O'Neill, PhD, Assoc Dean, Creighton Univ CME Div, 601 N 30th St, Suite #2130, Omaha, NE 68131. Phone: (800) 548-2633.

FEBRUARY 1996

- February 7-10 **Uncertain Times: Preventing Illness, Promoting Wellness**, Sheraton San Marcos Hotel, Chandler, AZ. Fee: \$375. 23 hrs AMA Category 1 credit. Contact: International Conference on Physician Health, AMA, 515 N State St, Chicago, IL 60610. Phone: (800) 621-8335.
- February 10-13 **51st Annual Postgraduate OB/GYN Assembly**, Beverly Hilton Hotel, Beverly Hills, CA. 22 hrs Category 1 credit. Contact: Dir of Medical Educ, OB/GYN of Southern California, 5820 Wilshire Blvd, #500, Los Angeles, CA 90036. Phone: (213) 937-5514.
- February 10-14 **Selected Topics in Internal Medicine**, Francho Bernardo Inn & Resort, San Diego, CA. Fee: \$595. 22 hrs AMA Category 1 credit. Contact: Rita Kunz, Secretary, Postgraduate Courses, Mayo Foundation, 200 First St, SW, Rochester, MN 55905. Phone: (800) 323-2688.
- February 22-23 **Burn Care Today**, St. Paul Ramsey Med Ctr, St. Paul, MN. 7 hrs AMA Category 1 credit. Contact: CME, Ramsey, 640 Jackson St, St. Paul, MN 55101. Phone: (612) 221-3992.
- Feb 29 - Mar 2 **Arrhythmia Management**, Silverado Resort, Napa Valley, CA. Fee: \$420. 13 hrs AMA Category credit. Contact: Mayo Clinic, Rochester, MN 55905. Phone: (507) 284-2511.



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